

ATLANTIC FISHERMAN

VOL. XXII

Registered U. S. Patent Office
JULY, 1941

NO. 6

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WET or DRY



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LUBRICATED
•
PRE-
WATERPROOFED
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QUALITY
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every step
of the way!



You can identify Columbian Rope by the Red, White and Blue surface markers.

Ask any captain who relies on Columbian Rope . . . he will tell you it handles easier — coils freely wet or dry.

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Boston Office and Warehouse

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Salmon or Shrimp

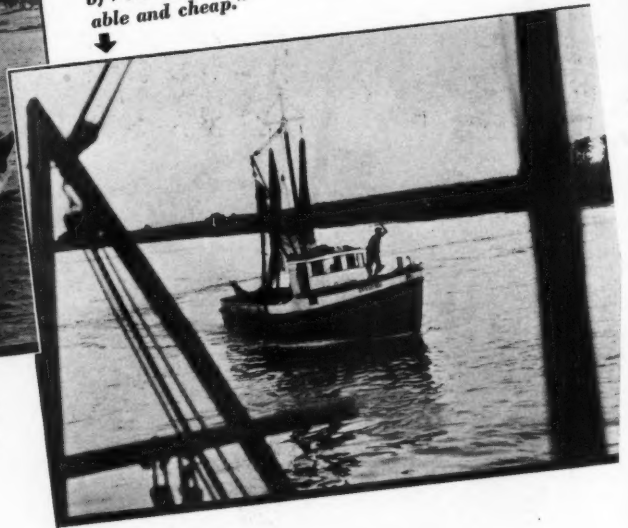


THIS ENGINE DOES THE JOB!



↑ The 76-foot power scow, Walrus, owned by Alaska Packers Association, is powered by two "Caterpillar" Diesel D8800 Marine Engines. In use in Bristol Bay, Alaska.

A "Caterpillar" Diesel D4600 Marine Engine powers the shrimp boat, Evelyn II. Owner Capt. Dan Thorpe, of Valona, Ga., says, "Best marine power built. Dependable and cheap."



WHETHER your fish come from the waters of Alaska or Georgia, "Caterpillar" Diesel Marine Engines will give you tireless, dependable, money-saving power.

Long life is built into every inch of a "Caterpillar" Diesel—quality construction through and through. And that quality counts when you come to figure up-keep costs. You'll find your engine working faithfully for weeks and months with mighty little expense for service or maintenance.

"Caterpillar" Diesel Marine Engines are rated for full-load, full-speed operation, 24 hours a day. The fuel system is absolutely

free from working adjustments. Burns low-priced No. 3 domestic burner oil cleanly and efficiently at all speeds.

Force-feed lubrication with filtered, cooled oil keeps every part thoroughly lubricated and gives more uniform cooling. And "Hi-Electro" hardened crankshafts and cylinder liners have far

greater resistance to wear than can be obtained by any other heat-treating method.

Many "Caterpillar" Diesel Engines that have operated over 20,000 hours are still going strong! For full information see your nearest "Caterpillar" dealer. Sizes from 25 to 135 hp.

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CATERPILLAR *DIESEL*

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MARINE ENGINES • MARINE ELECTRIC SETS

FRANK W. SCOTT

Says "OUR
ATLAS

IS OPERATING LIKE A CLOCK!"



● "I have had considerable experience with engines during my 20 years of fishing," says Captain Frank W. Scott of Morgan City, Louisiana, "but after a year's experience operating the 60 H.P. Atlas Diesel aboard the 47' shrimp trawler 'Anthony Boy,' I don't want an engine any better than Atlas.

"Our Atlas is operating like a clock and at a most economical figure despite the fact that we keep it hooked up all day, averaging from 12 to 14 hours, during which the engine burns only 3 gallons of fuel per hour.

"We fish in 19 fathoms of water and remain at sea on an average of 4 days per trip. Naturally, we run into some nasty weather...on some occasions water covering our engine...but we have learned to depend on our Atlas Diesel so that we don't even think of any danger that might exist."

ATLAS IMPERIAL DIESEL ENGINE CO.

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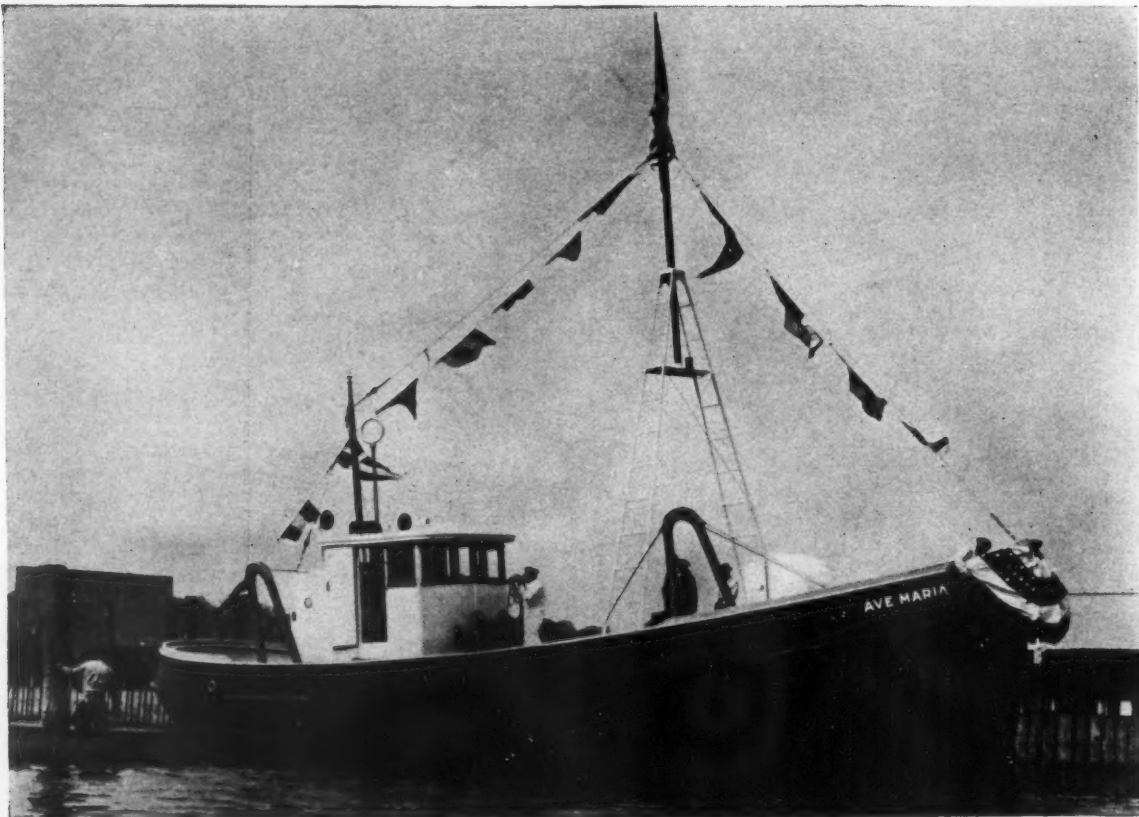
DEPENDABLE · ECONOMICAL

ATLAS
Imperial

DIESEL ENGINES

Superior DIESELS....

POWER THE O'HARA FLEET



FIRST of ten Superior powered boats to be built for F. J. O'Hara & Sons, Inc., of Portland, Maine, the newly launched AVE MARIA represents the last word in modern dragger design, with the most complete and up-to-date equipment available.

And sturdy, reliable Superior Diesels were selected to power the fleet, a definite tribute to their ability to furnish an ample supply of economical, dependable power for shorter trips, more fish and greater profits.

The AVE MARIA, designer Eldredge-McInnis, Inc.,—built by Maine Shipyards Corporation of South Portland, Maine—powered by a 4-cylinder, 9" x 12", 120 H. P. Superior Diesel furnished by Walter H. Moreton Corporation of Boston.



THE NATIONAL SUPPLY COMPANY... SUPERIOR ENGINE DIVISION

SALES OFFICES: Springfield, Ohio; Philadelphia, Penna.; New York, N. Y.; Los Angeles, Cal.; Jacksonville, Fla.; Houston, Texas; St. Louis, Mo.; Port Worth, Texas; Tulsa, Okla.; Boston, Mass. FACTORIES: Springfield, Ohio; Philadelphia, Penna.

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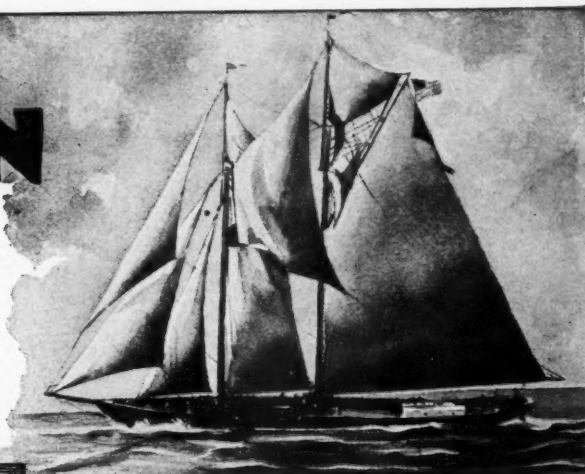
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Covering the Production and Processing of Fish and Shellfish on the Atlantic Coast, Gulf of Mexico and Great Lakes.



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Biological and Technological Aid to Shellfisheries

Chas. E. Jackson, Fish and Wildlife Service, in Oyster Convention Address, sees chance of National Emergency restoring production

SUSTAINED yield of shellfishery depends on the natural replenishment of oysters through propagation, growth and ability to become fat. During the past decade there has been a continuous drop in the production of shellfish in the United States from 175,000,000 pounds of meat in 1928 to 137,000,000 pounds in 1938, a 21.9 percent decrease. The loss of the value of the fishery has been even greater, from \$21,000,000 in 1928 to \$13,000,000 in 1938, a decrease of 38 percent.

The decline of the oyster crop can be attributed to several factors: depletion of natural (public) bottoms; destruction of oyster bottoms by trade and domestic pollution; lack of initiative in developing the market (this refers especially to the Middle Atlantic and South Atlantic States); legal restrictions which in the Chesapeake Bay and in the South Atlantic States inhibit the development of oyster culture; lack of protection against poachers and thievery. The greatest share in the production of oysters still belongs to the Chesapeake Bay which contributes more than 38 percent of the oyster crop. There was a noticeable decline in the productivity of South Atlantic and Gulf States (from 29.2% in 1928 to 22.6% in 1938) and in the Middle Atlantic States (from 25.4% to 18.5%). New England's share increased from 6.1 to 9.9 percent of total production.

National Emergency Opportunity

It appears to me that the present national emergency may supply the opportunity the oyster growers and shellfish producers have long sought in that large quantities of oysters and shellfish will be needed to feed our civilian and military population. It is no secret that great demands are being made on our supply of canned fish products. It is altogether possible that our entire output of canned fishery products of the current season will be needed for civilian and military purposes at home and abroad. Certainly there will not be sufficient stocks to promote increased consumption of canned fish, although every effort will be made to take care of normal domestic requirements. This should stimulate an increase in the pack of canned oysters, while fresh oysters and shellfish can be used to replace canned fish if these products should not be available. Our own country and our allies as well will definitely need more protein food. Canned fishery products particularly meet emergency requirements, since they can be easily stored under all conditions, are not subject to gas attack, and are less vulnerable to bombing attacks than food requiring refrigeration. Does this not offer an opportunity to the oyster industry, and with a well planned program, is it not feasible for oyster growers to obtain some permanent advantages that may restore consumption to former levels?

Aim of Service

It is the aim of the scientific staff of the U. S. Fish and Wildlife Service to carry out research along the lines which may provide information necessary for overcoming the adverse factors affecting the industry. Depletion of cultivated and natural bottoms, the principal causes of the decline, remains at present the problem of paramount importance. An approach to its solution varies depending upon whether we are dealing with the privately cultivated bottoms or with the publicly owned natural rocks.

During the past year the personnel of the U. S. Fish and Wildlife Service continued to provide technical information regarding propagation of oysters and rehabilitation of oyster bottoms under various conditions. Factors controlling propagation of oysters in Northern waters have been so extensively studied during the past 10 years that the fundamental knowledge of this process is now available and can be applied to local conditions. This service is being given by our station at Milford, the staff of which, in co-operation with the Connecticut Shellfish Commission, keeps oyster growers of Long Island Sound well informed regarding the time of spawning and expected time of setting of oysters.

It has been found that in a few days after setting many small oysters are devoured by newly set starfish and young drills. Furthermore, large numbers of them are smothered by jingle shells, slipper shells, and other mollusks which attach themselves to cultch and grow more rapidly than the oysters. These indirect enemies of the oyster are as important as the direct enemies which feed upon them.

Transplantation of oysters from place to place is the most common operation of an oyster grower. Investigations carried out at our station at Pensacola throw light on the question of what happens to oysters when they are transplanted from water of high salinity to water of low salinity and vice versa. Information of this type is essential for understanding the dangers and advantages of transplanting the stock from one locality to another. It also provides a key to the understanding of the causes of mortality among oysters affected by freshets.

Production of good fat oysters of standard quality is of course the aim of the oyster growers. Our present investigations conducted at Woods Hole, Milford, and at our new laboratory at College Park, Maryland, attempt to solve this problem first by determining how the fatness of the oyster could be controlled; second, by finding practical methods of increasing productivity of oyster bottoms. This difficult problem requires application of modern scientific methods and ingenuity in adapting the laboratory findings to natural conditions.

Storage Battery Maintenance on Fishing Boats

**E. M. Sutherland, Willard Battery Sales Engineer,
Tells how to Insure Maximum Battery Performance**

THE increase in electrical gear afloat is bringing the storage battery into greater prominence during these later years. Electrical loads have increased, and many demands other than auxiliary lighting are now made upon the battery. This places a greater burden on the battery than heretofore, not only aboard the larger fishing craft, but smaller craft as well.

Capacities have increased. The use of 115 volt circuits is becoming the rule rather than the exception. As a consequence the investment may be higher and should be protected.

The storage battery aboard your craft may have a general duty, or it may have been placed aboard for one specific purpose, but whatever the purpose the procedure to be followed in taking care of storage batteries is fairly well standardized. It taking care of storage batteries is fairly well standardized.

Installation

Although space aboard commercial vessels is usually at a premium and every foot of space has to count, every care should be taken to see that the battery is installed properly and that it may be serviced conveniently.

1. Location should be such that the battery may be installed or removed without undue exertion. Bilge installations not only are difficult to handle, but there is danger of fire or explosion due to free fuel.
2. Plenty of headroom should be provided so that all cells may be tested with a hydrometer and filled easily. One of the surest ways to foster battery neglect is to so locate the battery as to make service operations difficult.
3. The battery locker should be well ventilated not only to clear gas while charging, but to prevent unnecessary overheating.
4. Battery locations should provide ease in reaching connections in order that they may be tightened and cleaned at regular intervals. A loose connection not only is wasteful, but might cause an explosion. The results of dirty connections, such as voltage drop or poor contact, need no explanation.
5. The batteries should be placed as close as possible to the generator, or the starting motor if used for starting purposes. In so doing line resistance will be lessened and better operating voltage obtained.

If batteries are not so located as to permit ease in handling and servicing, the installation should be revised at the first opportunity. It is good protection for the battery investment.

Wiring and Connections

Why is it that one will find everything shipshape on deck while, all too frequently, inefficient wiring is found below—especially in the battery circuits? Numerous splices, frequently improperly soldered and poorly insulated, and undersized wire are in violation of good electrical practice. Shipshape wiring is not only desirable—it is a "must".

1. All wiring should be enclosed and protected—even battery leads to generators or starting motors should be enclosed or protected from abrasion or injury. Sometimes an unsuspected ground in the primary wiring (battery circuits, etc.) is the cause of electrolytic action or electrolysis.
2. Battery cables and leads, in fact all wiring, should be heavy enough to carry the required currents. Quite frequently poor starting, in the case of a Diesel engine especially, may be traced to undersize cables. The table of suggested cable sizes for Diesel starting should help to check Diesel engine starting hook-up.

Battery Installation—Correct Cable Size

To reduce resistance, or voltage drop, the starting battery should be installed as near the starting motor as possible. Excessive resistance or voltage drop, due to long or undersize

cables, is a source of serious starting trouble. If it is desired to start the equipment from a distant point, a remote controlled starting switch of ample size is necessary. Recommended cable sizes are indicated in the following table.

Recommended Cable Sizes (B. & S. Gauge)

Total Length of Cable in Feet	ENGINE DISPLACEMENT IN CUBIC INCHES			
	Under 250 Cu. In.	250 to 500 Cu. In.	500 to 750 Cu. In.	750 to 1000 Cu. In.
5	0	0	0	00
10	0	0	00	000
15	0	00	00	000
20	00	000	000	0000
25	00	000	0000	0000

(Bore) 2

Engine Displacement = $3.14 \times (2) \times (\text{Stroke}) \times (\text{No. of Cylinders})$

3. All apparatus should operate at the ship's circuit voltage, or the necessary provisions made to adjust the ship's voltage to the apparatus. Ship to shore phone, receiving apparatus, fans, howler and like apparatus should be connected so that they operate across the main battery or separate batteries should be provided. Connections made to individual cells, or groups of cells (tapping in), not only cause unbalanced cells in the battery but may cause an explosion, especially when the battery is on charge and the tap-in connection shakes loose and sparks.

Battery Terminals

All battery terminals must be kept clean and bright. It is unwise to wait for corrosion to form before it is removed. Prevent its formation.

1. At least once a year, and perhaps oftener, all battery connections should be loosened.
2. At this time, all corrosion, grease and dirt should be removed by means of a wire brush and if necessary, kerosene. *Do not use gasoline.*
3. Jumpers, nuts, bolts and screws may be easily cleaned by immersion in a bath of washing soda and warm water.
4. All terminals, cables, nuts, screws, or bolts, which have been affected by corrosion should be replaced with new parts.
5. Finally, all connections should be tightened thoroughly and a corrosion preventative applied.

Corrosion Preventatives

From an economy and efficiency standpoint, it has been found by long experience that vaseline, or petrolatum, serves as an excellent corrosion preventative. Experience recommends the following routine:

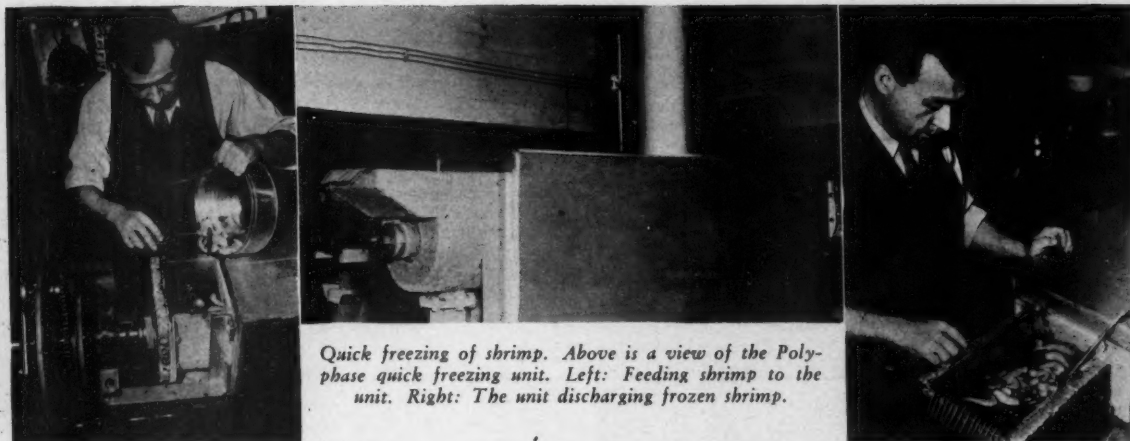
1. Wipe the contact surfaces of the terminal and lugs with just enough vaseline to cover the first or index finger.
2. Tighten the contact, squeezing any excess out of the joint.
3. Wipe off lightly all excess vaseline, leaving a thin coating on the body of the terminal.

If this method is followed, protection will be obtained, collection of dirt will be minimized, and the spreading of grease on the battery, especially in a hot engine room, will be stopped. Clean terminals help to keep the rest of the battery clean.

Cleanliness

A dirty, ill-kept battery does not speak particularly well for the "black gang" and it definitely reduces the efficiency of the

(Continued on page 23)



Quick freezing of shrimp. Above is a view of the Polyphase quick freezing unit. Left: Feeding shrimp to the unit. Right: The unit discharging frozen shrimp.

Quick Freezing Shrimp by Fluid Contact

Luis H. Bartlett, University of Texas Engineer
Describes Cheaper, Faster, More Flexible Process

IT is generally agreed that the least change is produced by the fastest possible freezing, provided the food is not subjected to temperatures markedly lower than subsequent storage temperatures. The fastest freezing is secured by bringing the food into direct contact with a chilled liquid, since heat is then abstracted directly from the entire external surface and the shortest possible thermal path is employed. Salt solution is the obvious fluid to use for freezing shrimp but investigation of this method seems to have been largely neglected. Perhaps one reason for this neglect is the deeply rooted opinion, among individuals in the fishing industry, that shrimp is rendered tough by contact with brine.

Any food product suffers marked change in physical and chemical composition when it is in contact for a long period with a concentrated salt solution at room temperature. Salt diffuses into the food, producing changes in the colloidal structure and chemical composition, and both water and soluble constituents diffuse into the surrounding brine.

The amount of salt which penetrates into the tissues depends upon several factors, among which are concentration of brine, temperature, and time.

It has been determined that 30 count shrimp tails which have been frozen by contact with chilled brine and drained for 15 minutes retain approximately 5% of adhering salt solution. Assuming that eutectic brine has been used, and that the frozen product is stored at 0°F., 0.15% is found to be the maximum quantity of salt which can be absorbed by shrimp flesh under these conditions. It seems that the addition of this small amount would be unlikely to have any marked effect upon the tissue, since fresh shrimp normally contains approximately 0.5% of salt.

The University of Texas Research Program

In September 1939, W. R. Woolrich, Dean of Engineering of The University of Texas, initiated a comprehensive program of food preservation research. One of the first problems attacked was that of improving methods of quick freezing shrimp, which is an important product of the extensive Texas fisheries. It was considered desirable to reduce the time interval between the capture and the freezing of this product. In order to accomplish this, it is axiomatic that the distance between the fishing grounds and the freezing plant be reduced. The obvious solution is to conduct the freezing process on the fishing grounds. A sea-going freezing process must be very fast and should be able to discharge a loose, individually frozen product which can be stored in bulk and packaged after delivery to port. The equipment must be light, simple, and last but not least, very compact so that it may operate in the cramped quarters available aboard a trawler or a "mother ship" which accompanies the fishing fleet.

The Polyphase Quick Freezing Process

A process has been developed to accomplish this task. Unexpected desirable features were discovered which have led to the use of this system for quick freezing fruits, many vegetables, meats, and poultry, in addition to the seafoods.

Freezing is effected by bringing the food into direct contact with a new type of heat transfer medium. This is termed a polyphase medium, since it includes liquid, solid, and gas phases.

When foodstuffs are brought into contact with polyphase media, heat transfer is exceedingly rapid and is nearly independent of fluid velocity. The mechanism is to some extent convection, but apparently conduction plays the principal role. Experiments by the author have shown that a given quantity of heat is removed from foodstuffs by a polyphase medium in approximately 60% of the time required by a liquid medium under the same operating conditions and at the same temperature. High viscosity produces a secondary effect which, contrary to expectation, increases the heat transfer rate.

The Freezing Unit

The experimental machine is very compact and simple. It comprises a helicoid conveyor operating inside a horizontal refrigerated tube which is partially filled with the polyphase medium. The ends of the tube terminate in open top compartments which are connected by a return tube to permit continuous circulation. A screen or grid is installed at the discharge end of the helicoid to effect separation of the frozen food from the stream of medium.

Food enters the feed compartment, where it floats in the stream of chilled medium and is carried through the tube by the motion of the screw. This stream serves to remove heat and also as a perfectly elastic conveyor which cannot deform or crush the most delicate food article. The medium is gently agitated by an oscillating movement of the helicoid which is superimposed upon the rotational movement by means of a unique mechanism. The speed of the screw may be varied so that any desired period of contact between foodstuffs and medium is secured. A very important effect of the oscillating movement is to constantly remove the film from the refrigerated surface and thus secure an unusually high rate of heat transfer.

Operating Characteristics of Polyphase System

- (1) Very fast freezing is secured. This factor allows a small freezing machine to handle a large throughput, since only a small amount of product is in process at one time.
- (2) The product is individually frozen and remains loose in storage. It may be packed in any size or style of container or it may be stored in bulk. The loose pack is an advantage to the



The shrimp boat "Evelyn II", owned by Capt. Dan Thorpe, Valona, Georgia, and powered with a Caterpillar Diesel D4600 engine. She is 40' x 12' 6" x 5'.

consumer, who is enabled to purchase large packages at a decided saving and easily remove the exact quantity of product required for immediate needs. Less time is consumed in preparation, since the individual shrimp may be thawed in a small fraction of the time required for a solidly frozen block.

(3) Each portion of food is coated with a film of polyphase medium which, by judicious selection of solute and colloidal substance, will serve as an efficient protective coating.

(4) The fact that heat transfer rates are nearly independent of circulation velocities enables very low agitation rates to be used and correspondingly reduces energy losses.

(5) Dilution of the medium, which has been a serious disadvantage of previous fluid contact freezing systems, is eliminated by the polyphase medium.

(6) The freezing unit is very low in first cost and, because of its simplicity, maintenance charges are almost non-existent.

(7) Only small quantities of medium are required to charge the machine.

(8) The unit may be brought quickly to operating temperature after a shutdown period.

(9) Very little power is required to operate the helicoid conveyor.

(10) The unit carries its own insulation and can be operated in hot environments.

Experimental Quick Freezing of Shrimp

Although the system was developed originally to quick freeze shrimp, nearly two tons of other foods were frozen before any shrimp was processed. Data collected during these operations was of great value in the shrimp freezing runs. An aqueous solution containing 21% of the salt-sodium chloride—and a small proportion of an edible colloidal substance was used. The salt employed was very nearly free from soluble calcium and magnesium compounds. Operating temperatures were maintained between minus 2° F. and minus 3° F. and from 3% to 5% of the medium was in the dispersed solid phase.

The freezing machine weighs 700 lbs., requires a floor space of 8 feet by 16 inches, has 8.5 square feet of effective direct expansion ammonia jacket area and requires a charge of 18 gallons of polyphase medium. A 5 horsepower, two cylinder, single acting ammonia condensing unit furnishes refrigeration. It is possible to chill the unit from 70°F. to minus 2°F. in twenty minutes and to discharge fully frozen shrimp within less than one half hour from the time the compressor is started.

The shrimp used in these experiments were caught in Matagorda Bay, iced on board the trawler, and landed at Port Lavaca, Texas. Here they were beheaded, packed in crushed ice, and transported to the freezer by motor car. The average count of this shrimp was 29 pieces per pound although some

small ones of 54 count were sorted out and frozen separately. Freezing times for the 29 count was five minutes and for the 54 count was three minutes. The product was drained in a compartment held at 0°F. for fifteen minutes and then packed in large cans closed by slip covers, which contain approximately 40 pounds of frozen shrimp. No glaze is necessary, since protection is assured by the can and also by the film of polyphase medium, but it may be applied before packaging, if desired. A small experimental lot was quite successfully glazed by plunging momentarily into chilled water. The machine was operated at feed rates of 45, 60, and 80 pounds per hour, using evaporator temperatures of minus 9°, 11°, and 14°F. respectively. It is estimated that the limiting rate is 120 pounds per hour with evaporator temperature held at minus 20°F.

Testing the Frozen Product

After two months' storage, samples were analyzed for salt content with the following results:

Entire Shrimp Tail.....	1.76% NaCl
Meat of Shrimp Tail.....	0.59% NaCl

Samples of this product and also of a sharp frozen lot were cooked in flowing steam for 30 minutes, cooled, peeled, code labeled, and submitted to a group of twenty judges. The judges were asked to grade as superior, normal, or inferior, both the tenderness and flavor of each sample and also to indicate which sample was preferred for personal consumption. The results of this grading were as follows:

Quality Grading of Shrimp Frozen by Two Methods

Preferred sample	Sharp Frozen		Frozen by Polyphase Process	
	8		12	
	Tenderness	Flavor	Tenderness	Flavor
Superior grade	3	9	14	12
Normal grade	15	9	6	8
Inferior grade	2	2	0	0

Commercial Possibilities

It was previously indicated that the system was developed primarily to freeze shrimp, but its utility is not limited to any single product. The process is well adapted to carry cold weather to the Southern fishing grounds and literally to freeze seafoods "while they are still kicking". Much of the fisherman's labor is wasted through spoilage before the catch ever reaches market. Tressler states that fish packed in ice are in prime condition for only a few hours and are unfit for food after one to three weeks. Often fishing boats stay at sea for lengthy periods and a portion of the catch deteriorates. Such losses may be entirely prevented by the installation of freezing facilities.



The 52-ft. shrimp trawler "North Easter", owned by Capt. John Lopes, Carrabelle, Florida, and powered with a Cummins Diesel.

Interesting Experiences of a Swordfisherman

Capt. John E. Hutcheson tells of his Activities in Fishing, both as a Hobby and as a Business

PRACTICALLY all my life, from the time I was a small boy, I have hunted, fished and trapped, both as a business and as a hobby. I inherited the love of the sea.

When I graduated from high school a school chum and I got a job on a tramp steamer going to the West coast—the S.S. *Graylock*.

She was bound on a three and a half months' trip by way of the Canal. My job was that of officer's mess boy, and after my work was done I used to sit up on the fo'c'sle head and watch the different kinds of fish that I might see breach. This was my first experience on blue water. We were 22 days at sea before we put into San Diego. From San Diego we went to Wilmington, which is the port of Los Angeles. While there I went over to Catalina Island, which was noted then for its white marlin fishing and tuna and broadbill. I spent my whole leave there after talking to some of the fish guides who worked for Zane Grey. On the first evening a broadbill swordfish was brought in, caught on rod and reel. It was the first one I had ever seen, although I had read a great deal about them and how they were caught both by commercial fishermen and sportsmen. I made up my mind that I wanted to get a job on one of the fish boats and become a fish guide in big game fishing. One of the guides told me to go up to the Avalon Tuna Club. I talked with the manager and he told me that there were no vacancies of mates on any of the sport fishing boats.

On One of Zane Grey's Boats

After the first voyage, I signed on again in New York and went out to the West coast. When we arrived at Wilmington, I went over to Catalina again and luck was with me this time as they needed a mate on one of Zane Grey's fishing boats. I worked there for two years, gaining all the knowledge I could on all kinds of fishing.

High Boat at Montauk

I came back East and decided that just as soon as I had saved enough money I would have a boat built to order for me. I had my swordfishing equipment put on my boat down at Greenport Basin. I then went down to Montauk and started swordfishing. I was fortunate enough in getting George Beckwith as striker, one of the best swordfishermen down at Montauk. George and I struck it off swell as he was just as nuts about swordfishing as I was. We were high boat that year.

That year I did not have an outfit for catching swordfish on rod and reel as I could not afford one and all my money was tied up in my boat. We laid at the Montauk Yacht Club and every day that we did not have a party George and I were off on the grounds, commercial swordfishing.

At the Yacht Club I was the youngest fish guide. I was up against some of the biggest fish guides in the country, men much older than I, with years of experience in big game fishing. They included: Herman Gray, Tommy Gifford, Bill Hatch, Bill Fagen, Howard Lance and a number of mates who are now prominent fish guides. I fished from the Yacht Club for five years, going South in the Winter to West Palm Beach, there guiding for sailfish and going over to Bimini and down into the Keys for giant tuna and marlin.

Nova Scotia Visit

Later I then went to Nova Scotia to work for the Province with Herman and Bill Gray, to develop the giant tuna and swordfishing in Nova Scotia on rod and reel. I was stationed for a short time at lower Wedgeport. I was then transferred to Liverpool for a short time, then to Louisburg, Cape Briton, which is one of the largest swordfishing ports of Cape Briton. My job there at Louisburg was to teach the Louisburg Guides Association fishermen, who were all commercial swordfishermen, how to prepare a bait for swordfish, and the proper equipment to use, and to get fish chairs installed in the stern of their boats in order that a sport fisherman could catch a broadbill on rod and reel.



Capt. John E. Hutcheson in action.

Incidentally, during my stay at Louisburg I went down to Gabarus Bay and caught the first striped bass ever caught on rod and reel. In Nova Scotia I was told at the time by the Bureau of Fisheries that they did not know that the striped bass were found that far North.

Development of Harpoon

At Louisburg one evening while I was sitting on the Government wharf talking with some commercial swordfishermen, there was one fisherman splicing some steel cable and I noticed how easy the marling spike opened up the strands of the cable. The idea then struck me to perfect the harpoon, similar to that shape. How deep the penetration would be if I could only devise some way in making it toggle.

The next day I went up to the local blacksmith and obtained a piece of round steel, which was the steering shaft of an old automobile. The only tools I had to work with were two files, a hack saw, and a steel bit and drill. I made my present Bullet model harpoon from this shaft. The blacksmith did heat and flange the tail of this dart for me.

I made three of these darts, round and sharp like the finger nail of your little finger. With this idea, if the dart struck the backbone it would ricochet and keep on going. I knew the fault of the old-time Down East dart; if you happen to backbone the fish you often killed him dead, but you would lose him with the dart coming out. I wanted to eliminate this in my dart. I then tried these darts out on swordfish and large blue sharks; the penetration was terrific, nine times out of ten the dart going clean through the fish and toggling on the other side of the stomach.

I showed these darts only to one commercial fisherman, who was a friend of mine that I knew I could trust. In fact, I gave him one of these darts that I had made and he tried them out on fish and saw how quickly they would kill a swordfish and not be stopped by bone.

A Museum Specimen

While swordfishing at Louisburg, a commercial fisherman came in one night with the smallest swordfish I ever saw, hanging from the masthead by a strap. The full weight of the fish was 57 pounds and he had just sliced him on one side and I knew that this fish would be valuable for the Museum of Natural History for a small specimen. I purchased the fish from him for \$5.00 and gave him back the meat after skinning off the fish. I immediately shipped the skin of this fish to Fred Parke in Bangor, Maine, who is one of the best taxidermists in this country for mounting broadbill swordfish. This small specimen now hangs in the Museum of Natural History in New York.

Maryland Crabs Bring Highest Price in Years

CRABS were scarce in the Maryland waters of the Chesapeake Bay during the month of June. At the opening of the season, on May 1st, there was a glut, and as always, after the first opening month, there follows a scarcity. Soft crabs sold in the Crisfield wholesale market during June for as high as \$1.80 per dozen, the highest price in years. Crabs usually migrate from the Virginia to the Maryland waters in July, August, and September.

Deals Island Soft Crab Plant

Hance B. Sterling of Crisfield has opened a soft crab plant at Deals Island. He is connected with A. G. Sterling Co. of Crisfield.

Maddrix Returns

C. T. Maddrix, who has been conducting a crab business in Fort Myers, Fla., during the Winter months, has returned to Crisfield, where he will work in the crab business until the Winter season.

Crab Plants Pass Inspection

The State Department of Health has been inspecting various crab plants in Maryland, under the direction of A. L. Sullivan, Chief of the Bureau of Food and Drugs of the State Department of Health. The results of these inspections were generally favorable. The operators of plants realize the necessity of placing the plants in good sanitary condition at the beginning of the season and keeping them so, also the importance of personal cleanliness on the part of employees, and of careful handling of the products to prevent contamination, and of the necessity for quick refrigeration of the crabmeat to prevent spoiling.

Shad Nursery to Check Depletion

In an abandoned millpond near Snow Hill, Md., on the Eastern Shore, the State Conservation Commission is establishing a shad nursery to help solve the depletion problem. There are in it now 350,000 shad fry, a half-inch or so long. Soon there will be 1,000,000 all obtained from the four stations in which the State and Federal Governments are dealing with shad eggs in this section.

By October the 650,000 fish which are expected to survive the Summer will be fingerlings about three inches long. Then they will be released. If a far greater proportion of them survive in the shad contest against natural enemies than has been the case with the fry, then Maryland's next generation may enjoy an increase of great importance.

Dr. R. V. Truitt, director of the State Biological Laboratory, is conducting the experiment.

The Laboratory at College Park

The Fish and Wildlife Service recently completed the construction of a laboratory at College Park, Md., on the campus of the University of Maryland. The first two floors of the three-story structure are occupied by the fishery technology offices and laboratories of the Service which serve the Eastern United States. The researches conducted therein are to improve the preparation, processing, storage and handling of fishery products.

Half of the third floor is occupied by the central offices and laboratories of the shell-fishery investigations. Here experiments are concerned with improvement of the quality of oyster meats, oyster farming methods, and the detection and control of oyster diseases.

The commercial fishery investigations of the Eastern seaboard also occupy the third floor. This unit is concerned with biological research designed to conserve and rehabilitate the commercial fisheries from New York to South Carolina.

The presence of this laboratory on the campus gives opportunity to students for practical training in fishery work. In co-operation with the University it also supports fellowships for graduate degrees in chemistry, bacteriology, and nutrition. Land for the building was donated by the University of Maryland.

Virginia Mussel Shells Used in Beauty Treatment for Oysters

MILLIONS of pounds of ribbed mussel shells from the marshes of the Eastern Shore of Virginia are being planted on the oyster grounds of The Chesapeake Corporation of West Point, in the York River as cultch for oyster larvae.

Mussel shells are a by-product of a thriving industry brought into being by the shortage of vitamin products formerly obtained from northern European countries. It is hoped that this thinner, more fragile shell, which to date has been of little commercial value, will prove superior to the oyster shells now in use in that it will crush and break into small particles.

"Where several oysters strike on one thick hard oyster shell, unless they are forcibly divided by costly hand labor, they mature into a wild, misshaped product. Single oysters transplanted at the opportune time to the proper ground produce the best half-shell stock. It is hoped that by furnishing this basic aid, mussel shells will give momentum to the fast improving condition of the York River."

Four years ago The Chesapeake Corporation, who produce SEA-RACS—the oyster cultivated by hand in wire baskets, began their program of rehabilitation for the York River. To date a quarter of a million bushels of shells and cinders have been planted as part of the program to replace those shells which have been removed for agricultural lime and chick grit. In those places where this denuding of the bottoms was not too severe, this shelling is showing good results. This year, as in 1940, mature oysters from Loug Island Sound were imported as spawners. It is hoped that by introducing this Northern bivalve further improvement will be seen in the York River oyster.

Increased Output for Shad Hatcheries

In spite of the fact that towards the last of the shad season, when the market dropped so low, J. T. Meyer, Superintendent of Hatcheries for Commission of Fisheries, said that the 1941 season was much better than 1940, with an increase of 3,887,005 eggs handled in State hatcheries reported for this year.

In charge of the work which was done on the Mattaponi, Pamunkey and Chickahominy Rivers, Meyer included a summary of the work carried out during the past year in a report to Commissioner J. Brooks Mapp. The report showed the Chickahominy River hatchery was in operation from April 21 to May 31, during which time 176 spawning roe shad were caught and stripped, from which were received a total of 4,614,000 eggs.

The Mattaponi hatchery, which was in operation from April 18 to May 31, had a total of 61 spawning roe shad caught and stripped, from which 1,537,000 eggs were received.

The Pamunkey River hatchery was in operation for the same period as Mattaponi, received a total of 2,450,000 eggs from 90 spawning roe shad caught and stripped.

Closed Crab Season

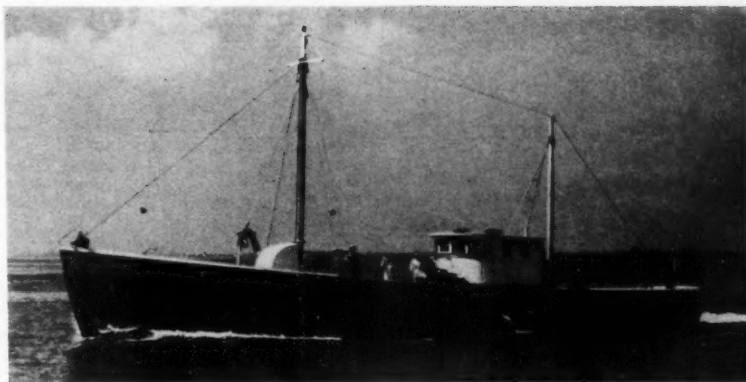
Indications that Tidewater crab packers and the Commission of Fisheries were laying plans to aid in conservation efforts of the crabbing industry were apparent when G. C. Bentley, secretary of the Hampton Crab Packers Association, appeared before Mapp asking for measures to be adopted to aid the crab packers and fishermen.

Pointing out that any measure which would only prohibit the possession of the sponge crab would be just a waste of time since the crabs are being caught anyway, Bentley offered as a solution a Commission adopted plan of prohibiting crab catching in certain areas at specified times.

He said that after consideration of the problem he had arrived at the conclusion that during the sponge crab season an area at Ocean View including Thimble Shoal Lighthouse to Cape Henry, be set aside as a crab sanctuary.

Bentley stated: "We believe that if the area were closed during July and August, about 90 percent conservation of sponge crabs would be effected."

The "Manchonoch", formerly owned by W. B. Fountain, Norfolk, Va., now owned by Capt. B. Felton Forrest, Jeffs P. O., Va. The "Manchonoch" was converted from a 110 ft. sub chaser to a trawler in 1940. She is equipped with a 210 hp. Wolverine Diesel engine, a Western Electric radio telephone, direction finder, Fathometer, Hathaway deck equipment, Linen Thread twine, Wall rope, Robeling wire, Monel shaft and a Columbian wheel. She docks at the Isaac Fass Fish Co.



Army Hearing on Fishing Laws

Army engineers, fisheries' officials and fishermen, gathered in Newport News recently for a public hearing on whether existing regulations governing the placing of fishing structures (pound nets, etc.) in the Chesapeake Bay should be modified, heard Dr. Robert A. Nesbit, in charge Middle Atlantic fisheries investigation, state that the biological and economic problems which confront the States and the Service, can be handled most effectively if they are dealt with entirely separate from considerations of navigation.

Said Dr. Nesbit, who was first to testify before Capt. W. W. Lapsley, U. S. Engineers' Office, that in his opinion revision of existing Federal regulations concerning setting of fishing structures in Chesapeake Bay and its tributaries would give the States (both Maryland and Virginia) a free hand to improve their conservation efforts.

After testimony had been heard by various persons interested, Captain Lapsley summarized the proposal for marking the channel. These were listed as: A proposal for the adoption of the 1200-foot pound net; adoption of the four-foot stake above high water; those testifying unanimously agreed that the red lights marking the fishing structures should be dispensed with and that there should be a 200-foot gap between nets.

"Karibou" of Cambridge, Md., Converted

The yacht *Karibou*, converted to fishing party service, is 60 ft. overall, with 15½ ft. beam. New equipment consists chiefly of: a Mack Mariner Diesel, 140 hp. at 1800 rpm., Model 605Y engine equipped with Twin-Disc reduction gear, with 3 to 1 ratio, Tobin Bronze shafting, Goodrich cutless rubber bearings, 32 x 32 Columbian propeller, Exide starting batteries, Gates pilot house controls, Columbian Bronze water strainers, Atlantic and Pacific buoyant apparatus, Shipmate kerosene stove, Pyrene fire extinguishers.

The Mack Mariner Diesel engine and engine-room equipment was furnished and installed by Nat Gates, Jr. & Son, Mack Marine Diesel distributors of Crisfield, Md. The vessel is owned by Capt. Preston Marshall and Southey G. Truitt of Pittsville, Md., and hails from Cambridge, Md. She is operated by Captain Marshall.



The converted yacht "Karibou".

Standard System of Vessel Inspection Urged by Robert H. Moore

FOR many years the law of the sea has required of the vessel owners that their ships shall be seaworthy at all times.

In consequence it behoved the vessel owner to pay particular attention to the soundness of his vessel with respect to her ability to stay afloat. For instance, the condition of her rigging, engines, auxiliary machinery, such as pumps, and of course the structural condition of the hull. As time went on decisions with respect to the owner's responsibility in this department were extended to include ground tackle, defective condition of auxiliary machinery and the running rigging.

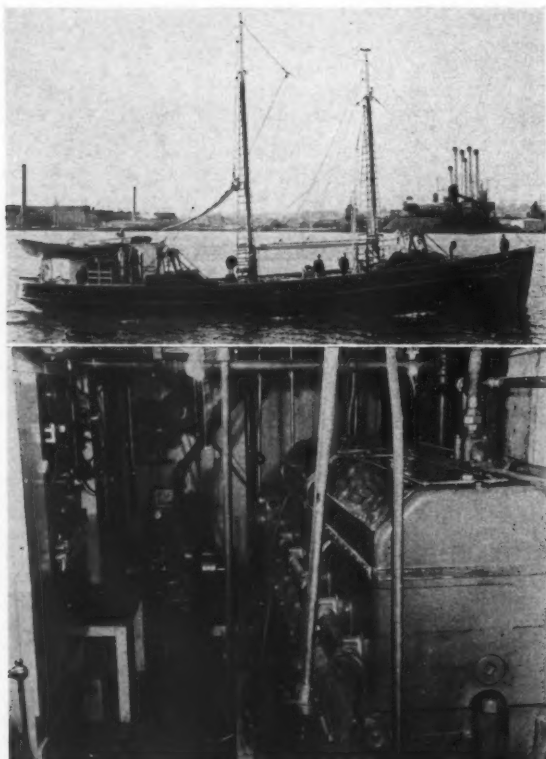
Progressively the courts began to recognize an improvident order given by the captain or other representative of the owner which result in personal injury as a liability on the part of the owner. As a rule the court decisions which established unseaworthiness or improvidence on the part of the owner were founded upon the owner's privity or knowledge. If it could be established beyond peradventure that the owner had no knowledge of the primary condition which resulted in an accident then he could not be held responsible for the result.

It was common practice for an owner to limit his liability or financial responsibility for accidents or damage claims to the appraised value of the vessel at the time the incident occurred. Only too frequently did the petition in admiralty to limit the liability of the owner result in a meagre sum, wholly inadequate to compensate injured members of a crew or the dependents of those lost.

Until very recently the burden of proof with respect to unseaworthiness or improvidence was upon the plaintiff who claimed damages as a result. Within the year decisions have been handed down in our United States Courts on the principle of *res ipsa loquitur*, or as the lawyers say, "The thing speaks for itself", or in simple language, should the gilsun hook straighten out, thereby permitting the rollers to fall on a man and injure him, it is to be presumed that the gilsun hook was defective and the burden of proving that it was not defective is placed upon the owner.

It would appear that the tendency of the courts is to sustain decisions not to the best interest of the vessel owners. For instance, it is a pitifully simple matter for a lawyer to solicit statements and testimony from fishermen to the effect that any specific piece of auxiliary machinery, running rigging, tackle or gear was defective. To refute such testimony the owner has only the word of his captain and himself. Any young lawyer worthy of his license to practice should be able to get to a jury on a question of fact. It is axiomatic that verdicts of juries generally reflect their sympathy for the injured or bereaved rather than intelligent analysis of the facts of evidence, and unless the owners can institute a rigid system of inspection wherein all the vital gear of the vessel is inspected at least once a month by a thoroughly qualified person, the odds are all in favor of the negligence, lawyers and the crew.

In ports where fishing vessels congregate, the owners should organize a standard system of inspection under one supervising head, trained to collaborate with the counsellors of the insurance companies whose duty it is to defend the owner.



The 93' New Bedford dragger "Dartmouth", owned by Capt. Robert Mitchell and skippered by Capt. T. F. Landry. The engine room view shows her 180 hp. Cooper-Bessemer, 6-cylinder, reversible engine with sailing clutch, and her Lister Diesel for hoisting. Other equipment includes Hathaway stern bearing and winch, Kinney clutch, Shipmate range and Fisher radio-phone and direction finder.

Long Island Catches

GOOD catches of pollock are being taken at Montauk Point. Striped bass is on the increase. Mackerel has been plentiful. The catch of flounders during the season has been very good and the size has been very good, too.

Large Blackfish

One of the largest, if not the largest blackfish ever taken from the waters of Peconic Bay was caught the latter part of last month when hauling seine at Cedar Beach. It tipped the scales at 15½ pounds.

A Manatee

A fisherman who has traps in the Sound off Greenport caught a manatee weighing about 75 pounds. These traps have yielded many unusual aquatic creatures during the years. The manatee is also known as a sea cow or puffing pig, and is rarely found in any except tropical waters.

Bonitos

Bonitos, which are great fighters, have been keeping the skippers busy since June 20th, out of Freeport. Boats have been taking from 100 to 400 daily.

Good Price for Sturgeon

A sturgeon weighing 325 pounds was caught a few weeks ago in the trap of the Short Beach Corp., an Islip fishing company. The roe which was taken from the fish was sold at the Islip dock at \$3.50 per pound, and remainder of the fish, 225 pounds, brought 26 cents per pound. This is the first time in the twenty-five years of business that they have had such an experience.

Butterfish Late

The run of butterfish, which last year arrived May 12th, made their appearance this year the last week in June. The trap fishing firm of Myron Brown made a catch of 210 boxes

The Wage and Hour Law and the Fisheries

IN 1938, Congress passed the Fair Labor Standards Act, familiarly known as the Wage and Hour Law. This Act sets a minimum wage and maximum number of hours per week, for all industry engaged in interstate commerce. In the Act itself the fishing industry was granted an exemption (Section 13 (a) (5)), which reads as follows:

"The provisions of section 6 and 7 shall not apply with respect to . . . any employee employed in the catching, taking, harvesting, cultivating, or farming of any kind of fish, shellfish, crustacea, sponges, seaweeds, or other aquatic forms of animal and vegetable life, including the going to and returning from work and including employment of the loading, unloading, or packing of such products for shipment or in the propagating, processing, marketing, freezing, canning, curing, storing or distributing the above products or by-products thereof."

An interpretation of the scope of this exemption has been given by the United States Circuit Court of Appeals, 8th District, in the Hawkeye case (*Fleming vs. Hawkeye Pearl Button Co.*, U.S.C.C. of Appeals, 8th District, May Term, 1940, No. 11,592). In this case the court held that the Wage and Hour Law was a humanitarian measure, and any exemption tended to defeat its purpose, and such exemption must be strictly construed. The exemption claimed must not only come within the letter of the Act, but also come within the reason for the exemption. Uncertainty of production, which is beyond human control, and the perishability of the product are the reasons for the fishery exemption. The court therefore held:

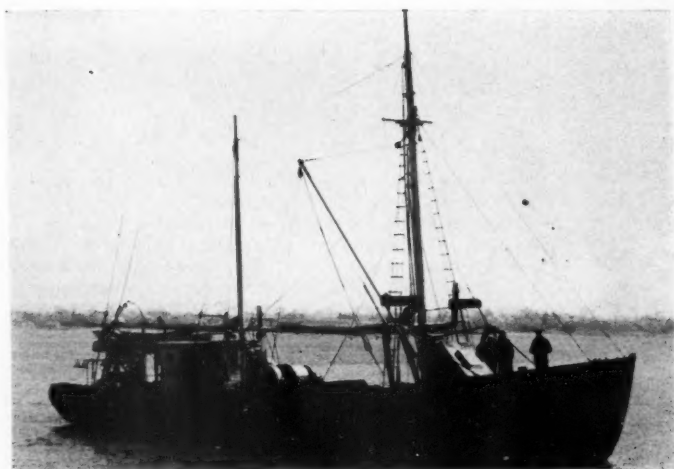
"The shore operations are exempted when, and only when they relate to trip operations. Trip operations are controlled and determined to a large extent by variable and unpredictable natural factors such as fog, tide, current, storm, high or low water, the run of the fish, and other similar factors of elements and forces not within human control. Such operations cannot be assigned to definite periods of services, nor can services be limited to specific hours . . . Shore operations which are connected with the preservation and conversion of the catch must occur immediately following the catch or the catch will spoil, and such operations have a necessary and logical connection with the trip operations and hence their inclusion in the statutory exemptions."

In order to give practical effect to the language of the Hawkeye decision, P. B. Fleming, Administrator Wage and Hour Division, Department of Labor, has proposed that the exemption will be limited to establishments which perform the enumerated operations on fish in the condition in which it was landed from the boat, i.e., on fresh fish. However, since many wholesalers and processors who handle for the most part fresh fish, also handle frozen, smoked, salted or pickled fish, and since segregation of employees appears to be impractical, the exemption will apply to any person engaged in any of the enumerated occupations in an establishment which handles only an insubstantial amount of non-fresh fish. An insubstantial amount shall be interpreted to mean up to 20% and shall be calculated on the basis of total dollar volume of fish received at the establishment within a six month period. The proportion 20% shall be computed on receipts of the six-months periods from January 1 through June 30, and from July 1 through December 31. The exemption in no case extends to office employees (other than receiving clerks, or shipping clerks actually directing the shipment of fish), night watchmen or similar employees not physically engaged in the enumerated operations.

(200 lbs. to a box), and the firm of Vail and Eldredge made a large catch, both firms fishing in Block Island Sound and off Gardiner's Island. Other firms in Bays and Sound made fair catches.

Six Thousand Times

Captain Frank J. Tuthill of East Marion, a commercial fisherman now nearing his nineties and still deeply interested in fishing, tells us: "I began fishing at the age of 16 years and continued pulling in fish for sixty-five years. As near as I can figure I passed the Long Beach Light 6,000 times going and coming. I'd enjoy pulling in fish again if I were younger. It's a good business."



The scalloper "Acushnet" of New Bedford, Mass., owned by Capt. Dan Mullins, and skippered by Capt. J. E. Jacobsen. She is 80' x 19' x 10', and is powered with an Atlas Imperial Diesel engine, 4 cylinder, 110 hp. at 325 rpm.; 9 in. bore x 12 in. stroke. She is rigged with Wall rope.



Louisiana Shrimp Has Special Closed Season

THE Louisiana 40-day closed shrimp season began on July 1. The Southwest Louisiana Shrimp Association in special session on June 25 went on record to the effect that "while the Association does not endorse the closed season it is a law upon the books of the State, and the Association will co-operate with the Department of Conservation in assisting in the enforcement of the law."

A committee including John Santos, Virgil Versaggi and Joe Ramos of Patterson, Victor Guarisco of Morgan City, and Jack Lopez of Abbeville, previously had called on the Department to ascertain if any changes were possible.

Members of the Association stated unofficially that they would stay in the State during the 40-day closed season and would not pack in other States. Some fishing may be done for the local (State) market which is allowed by the law. Many experienced packers believe that the closed season is not justified from a conservation standpoint, and even though the 40 days of inactivity will be a hardship, they are willing to co-operate in this experiment. Following is the ruling:

"... It shall be unlawful for any person, firm or corporation to seine, trawl for, catch or attempt to catch or have in possession any salt water shrimp taken from beyond the waters of this State between the dates of July 1st to August 10, both dates included, of any one year. . . . It is not intended by the provisions of this Act to interfere with the fishermen securing shrimp for bait; or for home consumption or local markets, in their fresh state, provided they are taken from the outside waters of the State; and provided further that shrimp for bait may be secured from either the inside or outside waters of the State at any time. . . ."

How Old is a Shrimp?

In the Gulf of Mexico they're catching, tagging and tossing back into the water 10,000 full grown shrimp to learn whether the life span of that species of sea food exceeds one year.

For a long time experts have generally believed that a shrimp's life cycle is completed in a year, but this can't be stated as a positive fact, according to Elmer Higgins, chief of the Division of Fishery Biology in the Fish and Wildlife Service.

So, during this month and next, scientists in the Fish and Wildlife Service will be busy trying to settle definitely one of the many uncertain points in man's store of knowledge of the shrimp.

So far as is known now, the shrimp dies shortly after spawning, which takes place when it is just about a year old. Shrimp in or about the spawning period are easily recognized by the men in the Fish and Wildlife Service. Tiny celluloid discs, bearing identification numbers and directions for returning, will be tagged on these year-old crustacea.

The government pays 50 cents for return of a spring and tag

with full information of where it was caught. It pays 35 cents for a tag only.

"40 Fathom No. 5" Has Trial

The first of a fleet of five 60' shrimp trawlers being built by E. Klonaris, Morgan City, La., for General Seafoods, Inc., of New Orleans, made a trial run recently. It is named the 40 Fathom No. 5. Power is furnished by a 170 hp. Diesel. The trawlers will be put into service at Port Lavaca, Texas, according to report. Captain Hans Peterson is in charge of the fleet.

Increased Price to Shrimpers

The pricing committee of the Gulf Coast Seafoods Products and Trappers Ass'n, Inc., met June 14 and upped the price of shrimp two dollars. Shrimpers will now receive \$16.00 per barrel for their catch. Earlier this month the price had been raised from \$12.00 to \$14.00.

Florida Legislation

ARCHIE ROSS, general agent of the Florida State Board of Conservation, in a comprehensive survey of fishing in West Coast waters, has appealed to all fishermen to get together, net fishermen, commercial fishermen, sports fishermen, sponge divers, sponge hookers, and retail fishermen—all to vote in the next election for the amendment giving the Conservation Board the authority to order and enforce simple, unified regulations to protect all, and at the same time to conserve the third largest industry in the State of Florida.

Legislation Passed

A bill exempts menhaden purse boats from the non-resident \$25 tax.

A bill to tax sponge boats to defray expense of a conservation department partol of sponge beds was passed by the House but was defeated in the Senate in the closing days of the session.

The Senate also killed a bill providing a general closed season throughout the State on mullet fishing between December 1 and January 20 of each year. The only general closed season authorized was one prohibiting the taking of sponge crabs, which are female crabs, in the spawning season, between May 15 and August 15.

The size limit of five inches from tip to tip, exclusive of claws, was voted for crabs.

A law passed without the Governor's signature fixes the minimum size of nets fishermen may legally use in Escambia County.

Sponge Legislation Proposed

Proposed legislation adding new taxes to the sponge industry will open about half the Monroe County beds to operation by Tarpon Springs divers, Key West fishermen were told.

Key West spongers will protest both the tax and the amendment which would let divers into their previously restricted territory. Key Westers have contended for years that the divers destroy the young sponges by walking over them in their heavy equipment.



The "Marlene", owned by the Seaboard Packing Co., of Portland, Maine, at dock of Sargent, Lord & Company. She was repowered last year with a MRA6, Superior Diesel engine, with 2:1 reduction gear.

Maine

Dragger "Iva M"

Lands Record Fare at Rockland

THE largest catch of redfish ever brought into Rockland was deposited on the O'Hara wharf July 2 by the dragger *Iva M.*, Capt. Lew Wallace. She had a total of 68,000 pounds and somewhat over 2,000 pounds of groundfish on board. The dragger left Rockland on the morning of June 29 and was back at the dock on the afternoon of July 2.

Four Boats Damaged in Fog

The *Queen of Peace*, new dragger of F. J. O'Hara and Sons, was one of four Portland fishing vessels damaged on June 29 in collisions off the Maine coast in the dense fog.

The *Queen of Peace*, on her first fishing trip, was able to continue, but three Portland sardine boats were laid up for repairs.

The Seaboard Packing Company's carrier, *Helen McColl*, was badly damaged in the bow in a crash with the R. J. Peacock Company's carrier, *Conqueror*. The *Conqueror's* stem was reported to have been shoved back by the collision.

The *Queen of Peace* was in collision with the Ramsdell Packing Company carrier, *Oquirrh*, inside Portland Head. The *Oquirrh* tied up at South Portland for slight repairs.

Continue Striped Bass Survey

Continuation of a striped bass survey of the Maine coast, started last Summer by Sumner Towne, Brookline, Mass., salt water fishing authority, has been announced by Sea and Shore Fisheries Commissioner Arthur R. Greenleaf. He said that Towne has already resumed his study of the various rivers, streams and inlets and that the work would be carried on for several weeks.

New Supervisors Appointed

The appointment of two veteran wardens to fill supervisor positions created by the recent deaths of Charles Coughlin of Rockland and Joseph Wallace of Portland, has been announced by Commissioner Arthur R. Greenleaf. Elwin G. Doughty of Long Island in Casco Bay, who has been on the force for 26 years, will take Wallace's place, while Frank Hallowell of Rockland, 13 years a warden, will handle the territory in that section of the State.

Doughty will have charge of the Western part of the State from Kittery to Yarmouth, while Hallowell's territory takes in the coastline and islands from Friendship to Bucksport.

New Rearing Station

Preliminary surveys for the selection of a site for a new State lobster rearing station in the Eastern part of the State are underway and a final decision will probably be reached within the next few weeks. The work is being carried on by Federal Fish and Wildlife Service experts, Biologist Leslie Scattergood and Hatchery Superintendent Thomas Dorr, with the assistance of

Commissioner Greenleaf and State rearing station Superintendent Thomas McKinney.

The plant will be built in either Hancock or Washington Counties and will produce fourth stage lobsters to be released on the beds in that section of the State.

The Boothbay Station is in operation for its third season and more than 1,000,000 fourth staggers will be produced and released along the coast from Eastport to Kittery.

Canned Lobster Ruling Cancelled

Commissioner Arthur R. Greenleaf, who barred the sale of canned Canadian lobster in Maine markets on May 1st, countermanded his ruling on June 17, after learning from Attorney General Frank A. Cowan that there was no law on the books at present that would support his action in barring the Canadian product.

Greenleaf said that his decision to stop the sale of the imports was reached as the result of knowledge that a large percentage of the lobster meat canned in Canadian factories was taken from crustaceans which were smaller than the Maine legal minimum size limit. Under the general law, he explained, it is illegal to sell "shorts" in Maine, so he reasoned that this would also apply to the canned product.

Salmon Restoration Experiments Continue

Experiments in New England salmon restoration, being carried on by the Fish and Wildlife Service, United States Department of the Interior, in cooperation with the Maine Department of Inland Fisheries and Game and of Sea and Shore Fisheries, are continuing to show progress.

Dr. George A. Rounsefell, Service biologist, made a trip to the Pemaquid River during April to construct screens across the river to be used for trapping and enumeration of any kind salmon fry developing from the natural spawning in the Pemaquid last fall.

The Atlantic salmon was formerly one of the most abundant food and game fishes in New England but in recent years has decreased almost to the point of extinction so that at present they appear only in a very few streams. The Service is optimistic, however, over the possibility of restoring this fishery to a high productive level.

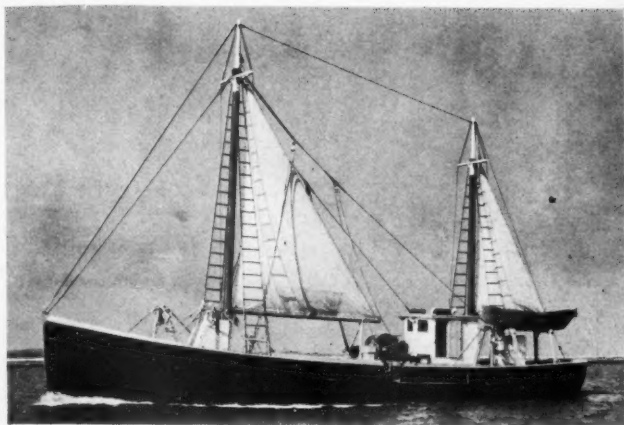
May Catches Show Big Increase

May was another good month for Maine fishermen with their catches bringing a total income of \$400,068, or 75% more than for the same period last year, according to the monthly statistical report of the Department of Sea and Shore Fisheries.

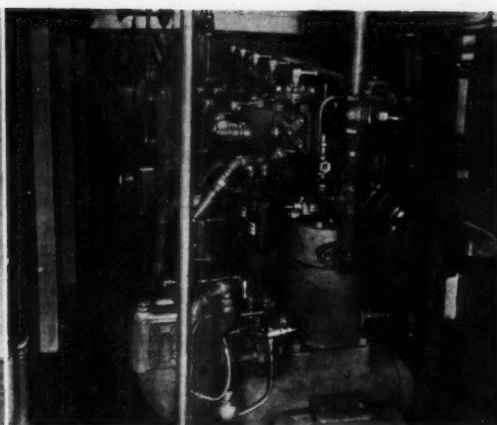
More than 753,000 pounds of native lobsters were landed as against a total of 488,000 last year. Canadian shipments were off from 701,000 to 423,000. Receipts for the Maine lobsters reached \$120,000. Herring sales were up from \$6,600 to \$39,000, while blood and sandworms reached a new high of \$22,300 for the month.



Bill Sklaroff of Provincetown, Mass., wouldn't believe it till he saw it—a 38-pound salmon caught in the traps by Capt. Joe Oliver.



The dragger "Rosalie F.", 79' 11" x 18' x 9 1/2', is owned by the Gloria F. Fishing Corp., of New York City, and was launched the early part of this year at the shipyard of Harry Mogck & Sons, Cape May, N. J. She is powered by a 5 cylinder, Model 35E, 10 x 12 1/2, Fairbanks-Morse Marine Diesel, starboard rotation, of 200 hp., 400 rpm., with regular standard F-M built-in equipment, as shown at right.



Gloucester

General Seafoods Plant to be Re-opened

GENERAL Seafoods Corporation, of Boston, is planning to reopen its Gloucester plant at The Fort, which has been closed since 1933. J. Lawrence Alphen, president and general manager, has announced.

Mr. Alphen said: "Increased landings of redfish, whiting, pollock, and flounders at Gloucester during the past several years make this port a logical place for General Seafoods to expand."

Complete quick-freezing and cold storage facilities will be installed with a capacity estimated at about 10,000,000 pounds of finished product annually. The Company also intends to provide for certain by-product operations. It is expected when the plant is in full operation it will require from 200 to 250 employees.

Redfish Fleet Further Curtails

Redfishermen have agreed to curtail their catches in an effort to bring a healthier condition to the redfish market, and have reduced the redfish vacation from eight-day maximum to a six-day rest for boats of all sizes.

Such action was approved June 19 by redfish dealers. The 60 local redfish draggers recently produced 2,885,000 pounds in 37 trips.

The largest craft is not to bring more than 100,000 pounds redfish in any one trip, while the smaller draggers are allowed to bring in 60,000 pounds.

This is another trial experiment in an effort to adjust the production of redfish which has threatened to cause a sharp decline in the price of fish. Price here remains at \$1.85 per hundred pounds with the acceptance of this latest agreement.

Seized Lobsters Liberated

The State Department of Conservation has notified Mayor Sylvester F. Whalen that the department has liberated 534 live short lobsters and 45 live egg-bearing lobsters in local waters to aid the lobster industry here. The department director, Ralph H. Osborn, in his communication to the mayor, warns the lobster fishermen that future liberations will be dependent upon how well the lobstermen respect the laws in letting the "shorts" and egg-bearers alone so that the liberation may have the desired effect upon the industry.

Whale Invades Outer Harbor

An honest-to-goodness whale which Harbor Patrolman Francis C. Blake described as being at least 15 feet long, invaded the outer harbor June 19 and caused quite a ripple of excitement.

Cooper-Bessemer for "Bethulia"

A new 120 hp. Cooper-Bessemer Diesel engine is scheduled for installation in the *Bethulia*, Capt. Phil Curcuro.

Wisconsin

Issues Fishing Law Modification

THE Wisconsin Conservation Commission on June 11 announced the modification of its order No. F-445 covering lake trout, whitefish, yellow perch, sturgeon and fishing conditions and seasons in outlying waters of Lake Superior.

The order provides that the season on lake trout be closed from Sept. 25 to Nov. 15, annually, and for the same period on whitefish. Sturgeon will have a perpetual closed season, and fishing of yellow perch will be banned from April 15 to June 1.

During that period each year from the time the ice goes out until July 15, gill nets with a mesh of not less than 2 3/8 inches flexible rue measure may be used in waters not less than 40 fathoms deep for taking longjaws, herring and ciscoes.

No person may set gill nets with a mesh of less than 4 1/4 inches in lake water within the State's jurisdiction from July 15 to September 1, except that bait nets may be used to obtain bait for set hooks.

Gill nets with meshes of not less than 2 3/8 inches and not more than 60 meshes deep may be used for the taking of herring, provided that the bottom maitre cord or lead line shall be not nearer than one fathom to the bottom of the lake.

Size minimums for lake fish, as decreed by the Commission, are: Lake trout—1 1/2 pounds, or 1 1/4 pounds dressed; whitefish—16 1/2 inches until July 1, 1942, after which the minimum size shall be two pounds round, 1 3/4 pounds dressed; perch—eight inches until July 1, 1942, after that 8 1/2 inches in the round and 5 1/2 inches minus head and tail, and 1 3/4 ounces filleted; suckers—14 inches in the round, 10 inches with head and tail off. All other lake fish except herring, smelt, sheepshead and carp, eight inches.

The order also prohibits the use of a fish grinder to mutilate fish and provides that after July 1, 1942, any pound net operated in water over 35 feet deep shall be equipped with nets having a size of mesh not less than 4 1/2 inches, excepting that one or not more than two lifting sides shall be a mesh not more than 3 1/2 inches and extend to a depth of not less than 20 nor more than 35 feet from the top rim line of the pot or crib.

Special Dispensation for Fish Caught in Error

With carp, great quantities of other fish caught unintentionally, get into the nets. Ordinarily such fish are thrown back as it is against the law to take them.

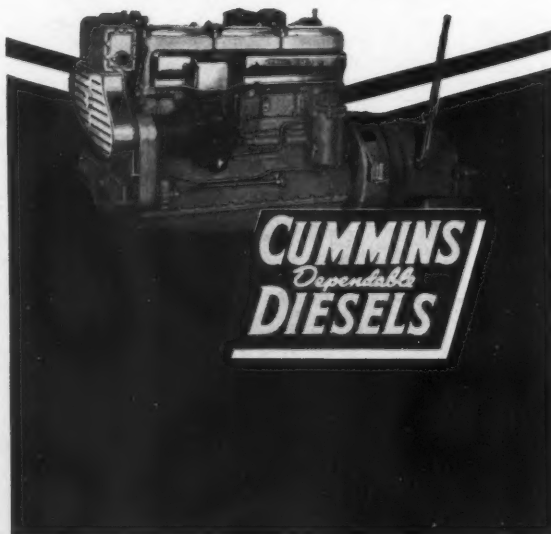
In order to dispose of such fish, most of which were smothered when brought in with the carp, Conservation Warden Stanley Apel gave special orders to sell such fish to marketmen, who advertise them as "fresh game fish for sale." However, the proceeds from such sales to market men are to go to the Conservation Department.

The Job's so Big... The Time's so Short

● Nothing like this has ever happened before! Never has America needed so much . . . from so many . . . in so short a time. Never has America needed power like she needs it today . . . dependable, highly productive power to forge the weapons of a strong and a free America. Yes, the need is big, the time is short, but Cummins Dependable Diesels have repeatedly demonstrated their ability to do the jobs where the need is big and the time is short . . . that's why Cummins Dependable Diesels have been so widely accepted for National Defense work . . . that's why you'll find Cummins Diesel power—whatever the job—doing it with "all-out" economy and dependability.

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CUMMINS ENGINE CO. • Columbus, Ind.



The Lobster Girls and (seated from left to right) Edward H. Cooley, manager of the Massachusetts Fisheries Association; Hon. Norman Littell, Assistant Attorney General of the United States, and Robert G. Jahrling, manager of the Highland Hotel.

"Life" Magazine's Cameramen at a Lobster Eating Demonstration

"WE are met here tonight to demonstrate to the public with the co-operation of *Life* magazine, that the eating of lobster in the shell is really a simple process." Thus spoke Robert G. Jahrling, genial manager of the Highland Hotel, Springfield, Mass., to a selected gathering assembled in the Highland's banquet hall Thursday night, June 19.

"Many folks would like to order lobster in the shell when they dine out in hotels and restaurants, but don't because they are timid about attacking the shells. To show America how simple it really is, cameramen from *Life* magazine have come here tonight to photograph us as we consume our lobsters, boiled and broiled, and whoever eats with the least waste and clutter will win a prize—a twelve-pound live lobster!"

The dinner was sponsored by the Massachusetts Fisheries Association in co-operation with the Highland Hotel, which used 126,000 pounds of this crustacean last year to win the record for the entire country.

Business, professional men, and civic leaders, to the number of 50, entered the contest, and after picking and cracking their way through one, two, three—or as many lobsters as they could consume—Charles F. Gaugh, president of the Bay Path Institute in Springfield, was adjudged as the man present who could eat a lobster with the minimum of waste and clutter.

He admitted that he was not a professional lobster eater, but that because he enjoyed sea food, he wanted to get every bit of goodness out of it.

Fish for Army Camps

THE following information from E. H. Cooley of the Massachusetts Fisheries Association gives an idea of the possible fish requirements by Army Camps.

"The tentative arrangement is for Army camps to utilize fish two meals per week. One of these would be canned, cured or smoked fish; the other fresh or frozen fish in some form. In view of the fact that approximately 1,800,000 men are to be in the camps, this would give opportunity for fresh and frozen sales up to about 900,000 pounds per week. It should be noted, however, that this is nation-wide, and that many purchases will and should be made locally, where ample supplies are available for the camps. It is likewise true that in the larger camps, where 40,000 to 60,000 men are to be fed, there are many local sources unable to supply that large a quantity of fish. Hence such orders would logically accrue to such sections as New England, Norfolk, or other production ports where sufficient volume exists.

The WOLVERINE

is Practically Fool-proof

says Capt. Lafford

of the "AMERICA"

The "America" had her first Wolverine installed in 1930 as a result of its reputation as an economical engine. Ten years of hard service proved its merit, and in 1940 a larger, 175 hp. Wolverine engine was installed.

The new engine has been running continuously for six months, and a wrench never has been used on it yet. Says Capt. Gilbert Lafford: "There's less to go wrong on a Wolverine than on any other engine I know. In fact, it's practically fool-proof."

The Captain of "America" is just another example of the many satisfied users of Wolverine Diesels. Have you considered the advantages of Wolverine for your boat? Write for Catalog No. 135.



The 74' Gloucester, Mass. dragger "America", Capt. Gilbert Lafford. Capacity 90,000 pounds. Powered by a 5 cylinder, 9 1/4 x 14, 175 hp. Wolverine Diesel engine.

Wolverine Motor Works, Inc. — Union Ave., Bridgeport, Conn.

"The real difficulties with the Government purchases are due to the right of the Government to refuse to take any or all of what they order. This, of course, seems necessary when we realize that quite often the purchasing officer, mess sergeant, or others will know nothing about plans for immediate evacuation of camp for field maneuvers. It is necessary that the boys be trained to leave at a moment's notice, and there is one instance cited where 30,000 men were ordered out of camp at 6:00 o'clock in the morning, and only one man in camp knew the midnight before that these men were to go. Logically, the purchasing officer might find himself with a carload of frozen fillets which he could not use."

Landings Continue Lead Over 1940

From January 1 through the first week in July at the Boston Fish Pier there were 2,923 arrivals and receipts of 147,044,900 pounds of fresh fish as compared with 2,812 arrivals and receipts of 107,289,600 pounds of fresh fish landed in the corresponding period of 1940.

Fishery Council Officers Re-elected

ALL officers of the Fishery Council were re-elected for a third term at the annual meeting on June 20. Frank W.

Wilkinson, half-century veteran dealer, became the president for the third time. Harry W. Weinstein was renamed vice-president while Sol Broome was chosen again as treasurer, with Samuel R. Katz as secretary.

The following were elected to the Board of Directors: Louis Beyer, Sol Broome, Joseph Cantalupo, Wilfred B. Coady, Bob Dorse, Henry Dusek, J. Irvine Edge, Edgar Greason, Jr., Harold E. Hamblen, E. R. Johnson, Michael Liebl, John H. Matthews, Paul O. Mercer, Cliff Morris, John Samara, Ludwig Schwarzschild, Sig. A. Smith, William Timmins, Samuel Traeger, Alfred Tucker, Harry W. Weinstein, Frank W. Wilkinson, Albert Woolley, August Straus, Dan Mullins, Wm. H. Carter, Dave O'Keefe, Jack Maibach, Charles Dorse.

(Continued on next page)



The re-elected officers of the New York Fishery Council. Left to right: Frank W. Wilkinson, President; Harry W. Weinstein, Vice-President; Sol Broome, Treasurer; and Samuel R. Katz, Secretary.

for **MAXIMUM** Profits
from **FISH BOATS**
Large and Small...
POWER and
RE-POWER
with **BUDA-LANOVA**
Heavy-Duty Diesels!

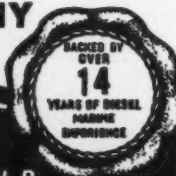


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ENGINES from 20 to 248 H.P.



The Executive Committee will consist of: Joseph Cantalupo, E. R. Johnson, Michael Liebl, Jack Maibach, John H. Matthews, August Straus, William Timmins.

President Wilkisson, in concluding his annual report which reviewed the remarkable accomplishments of the Council, said: "We all are on the threshold of an era of greater spending by the consumer. Already many signs are apparent that business is getting better in this industry. We must get people to spend part of their increased incomes on fish so that all of us can benefit. Now more than ever before we must get our product before the public in such a light that consumers will buy fish and shellfish rather than some other food. And now more than ever before we must lean on the Fishery Council to keep up and increase the tremendous sales promotional job that it has done on fish. Together, we have come a long way in two short years, but there still is a long way to go. Let's take advantage of the splendid start that has been made and make possible still greater efforts by the Council."

Morgan Wants Fish to be on Nutrition Program

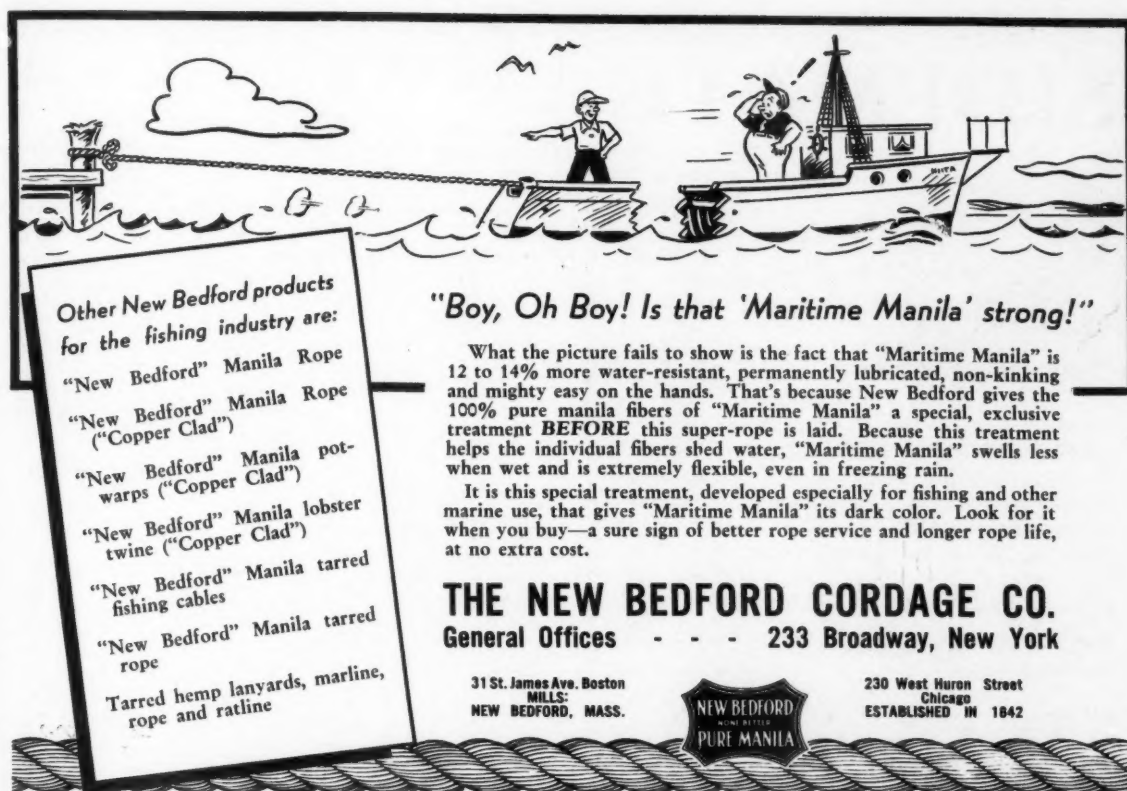
IN a recent radio address, William Fellows Morgan, Jr., Commissioner, New York Department of Markets, discussed the report of the National Nutritional Conference on the distribution and processing of foods. The following excerpts concern the fishing industry:

"The Conference recommended 'that governmental agencies co-operate with industry in making known to consumers the existence of large amounts of low-cost and nutritionally valuable foods that are not now fully used.' In this connection, one point that I expect to battle through with those in charge of the Nutrition Program is that fish should definitely be included therein. Not only is it nutritious but exceptionally low in price as well. The reason that it was not specifically included in the discussions was because it does not come under the jurisdiction of the Department of Agriculture. Commercial fisheries are under the control of the Fish and Wild Life Service, which is a Bureau of the Department of Interior. The statement was made that there was no surplus problem in the fish industry as they could always be left in the ocean. This, of course, is true but those who make such a recommendation do not take into consideration the interests of the consumer. Besides, why isn't the fisherman, who is the farmer of the sea, entitled to the same consideration as the farmer of the land?"

"Last week I met a group of mothers of the Lower East Side who are organizing a health movement with the primary purpose of co-operating under the Nutrition Plan. We had our pictures taken in the Essex Street Market in front of one of the fish stands. This stand was filled with five or six varieties of the freshest fish I have ever seen. Small mackerel, each fish a main course for one person, were selling at 5c a pound. I defy anybody to show me a better food bargain than that."

"Because we know fish to be so nutritious a food, as well as a cheap one, I inaugurated the idea of Tuesday is Bargain Fish Day and I am glad to say that a lot more fish is being sold on Tuesdays. The idea was started during the First World War when we had 'Meatless Tuesdays'. It was started then because meat was scarce. Although, at present, meat is far from scarce, the price tendency has been upward. Fish is an ideal substitute for meat. The fishing industry has been slow in educating the public about its product, but we in the Department rank fish with other products. It is included in Mrs. Gannon's radio broadcasts, which she makes every weekday morning from station WNYC at 8:25. At that time she brings to the attention of the housewives the comparative values of the perishable foods from day to day. She points out what foods are in season, those that are plentiful or scarce, the quality of the supply and whether or not the particular items are cheap, reasonable or expensive."

"This not only benefits the consumer but it is a great aid to the farmer of the sea as well as of the land, and the distributors, both wholesale and retail. For when the housewife's buying habits conform closely with market conditions, she stretches her food dollar by buying products which are in abundant supply. The merchant is able to move his stocks, loss from spoilage is minimized and the farmer is able to send his produce to market without fear of a glut."



Other New Bedford products for the fishing industry are:

- "New Bedford" Manila Rope
- "New Bedford" Manila Rope ("Copper Clad")
- "New Bedford" Manila pot-warps ("Copper Clad")
- "New Bedford" Manila lobster twine ("Copper Clad")
- "New Bedford" Manila tarred fishing cables
- "New Bedford" Manila tarred rope
- Tarred hemp lanyards, marline, rope and ratline

"Boy, Oh Boy! Is that 'Maritime Manila' strong!"

What the picture fails to show is the fact that "Maritime Manila" is 12 to 14% more water-resistant, permanently lubricated, non-kinking and mighty easy on the hands. That's because New Bedford gives the 100% pure manila fibers of "Maritime Manila" a special, exclusive treatment **BEFORE** this super-rope is laid. Because this treatment helps the individual fibers shed water, "Maritime Manila" swells less when wet and is extremely flexible, even in freezing rain.

It is this special treatment, developed especially for fishing and other marine use, that gives "Maritime Manila" its dark color. Look for it when you buy—a sure sign of better rope service and longer rope life, at no extra cost.

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ESTABLISHED IN 1842

NEW BEDFORD
MADE BETTER
PURE MANILA

With Vineyard Fishermen

By J. C. Allen

THE first month of Summer has gone astern and mingled with the wake of time. It beats the devil when a man thinks of it: the season hardly begun when it is thirty percent over! Yet the month of June was never more welcome in these latitudes nor has it recently brought more luck to the floating population. Barring a brief flurry of wind and fog, when things were tied up all around, June has been a darned good month for local sea-skimmers, and you may lay to that.

Warming Up

Summer fish struck according to schedule, but there was a difference, just the same. With a red-hot sun frying the gravy right out of a man's back as he hauled his gear, it took about three weeks to convince the gang that the water was still too cussed cold for real Summer activity. As a matter of fact, it was not until some adventurous bathers, half-cooked by the sun, had jumped overboard and turned blue and stiff in about eight seconds, that anyone believed it. Why this should be so is another one of those deep-sea mysteries that you read about; however, things are warming up as this report is written, the latter part of June.

Scup Make Old-Time Strike

Cutting back to fish, which is the real purpose of this entry in the log, the scup struck as they used to long, long ago. Not since old King Philip, himself, fished these waters has a hand-liner struck such going. Two-man boats, never mind how many lines they use, for we don't know, landed better than a ton and a half of scup per, in a day's fishing, and it wasn't just for one day, but for every blasted day in the week! Now, admittedly, these scup ran heavy and their over-all length was all that could be desired. Likewise, the water was not too bold where they laid. But even so, a man has to keep his twine moving to make any such haul as that. The old-timers have

always claimed that when one species of fish disappeared, another would return from a similar absence and it looks as if they were right. For the fluke has gone to the devil. Exterminated? Maybe, but you can't make the old-timers believe it. No, they swear by the Great Hookblock that things like this have happened too many times before. All right, then, here comes the scup to balance the account.

Mackerel Not Promising

Whether this same theory is working out in another direction, is likewise being discussed right now in the lee of the bait-houses. The actions of the mackerel are not promising, as we indicated last month. There has been no hand-lining for these fish, and the traps have taken very few. Schools have come and gone, but always moving like a streak of greased lightning, and they have been small fish for the most part.

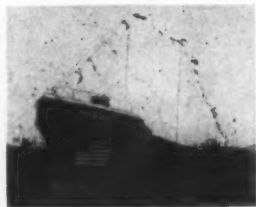
Bonito, After 40 Years

But, and here's the trade system popping up again; the bonito, which haven't run on this coast for forty years, have returned and how! The best haul made in any trap in these latitudes in nearly half a century was about a thousand pounds, and that was last year. Already, one set of gear has pursued up a ton and a half or better, at a single set, and the water is full of the critters. They are not the largest culls, but they run a good three pounds average, which is a nice fish, and they sell just as well as they did forty years ago.

Cod Bring Cash

Of interest to all old-timers, who can remember the days when fishermen made money and didn't have to spend it all for oil and twine, is the luck which has followed two or three line-trawlers and hand-liners who have followed the cod this Spring. They have hit it in good shape, and all hands know that cod, if they run to any size, mean real cash on the line. Well, there have been three of these schooners, and about all they have had to spend money for was grub. They didn't have to work offshore nearly as far as the draggers, either.

SHIPMATE



The BELMONT, latest addition to the Usen fleet, built by Snow Shipyard, Rockland, Me.

No fisherman will be surprised when he reads here that the BELMONT has a SHIPMATE Range in her galley. On the contrary fishermen would be surprised to read that any other kind of a galley range was installed on this ship. SHIPMATE is the standard range for fishing vessels and has been for sixty years.

SHIPMATES are made only by
THE STAMFORD FOUNDRY COMPANY
 Established 1830 Stamford, Conn.

RANGES

Fulton Market Wholesale Prices

Specie	June 1-7	June 9-14	June 16-21	June 23-30
Bluefish	.08-.35	.08-.40	.08-.40	.08-.45
Bonito	.03 1/2-.05 1/2	.02 3/4-.05	.02-.04	.02-.04 1/2
Butterfish	.01 1/2-.10	.01-.06	.02-.12	.01 1/2-.12
Codfish, steak	.05-.12	.07-.14	.06-.10	.04-.10
Codfish, market	.03-.07	.03 1/2-.06 1/2	.04-.06	.03-.05
Croakers	.04-.05 1/2	.04-.05	.04-.06	.02 1/2-.04
Flounders	.02 1/2-.18	.03-.15	.01 1/2-.18	.02-.12
Fluke	.06-.14	.07-.16	.05-.16	.06-.16
Haddock	.03-.07	.03-.06	.03 1/2-.06	.03-.05 1/2
Hake	.03-.06	.05-.07	.04-.06	.04-.05
Halibut	.13-.18	.14-.20	.16-.20	.12-.18
King Whiting (Kingfish)	.03-.05	.05-.05	.05-.06	.05-.06
Mackerel	.05-.18	.03 1/2-.17	.02 1/2-.11	.02 1/2-.20
Pollock	.03 1/2-.06	.04-.07	.04-.05 1/2	.03-.06
Pompano	.. ..	.. ..	.. ..	.50-.55
Salmon, Pac.	.16-.24	.16-.20	.15-.25	.17-.22
Salmon, Atlantic	.14-.25	.16-.25	.18-.23	.15-.22
Scup	.02 1/2-.07	.02-.05	.01-.07 1/2	.01 1/2-.04
Sea Bass	.02-.11	.02-.12	.02 1/2-.10	.02 1/2-.10
Sea Trout, gray	.02-.18	.03-.23	.02-.22	.02 1/2-.22
Shad	.01 1/2-.07	.01-.08	.01-.05	.. ..
Red Snapper	.18-.18	.18-.18	.. ..	.18-.18
Sole, gray	.05-.11	.08-.12 1/2	.07-.09	.06-.08
Sole, lemon	.05-.08	.06 1/2-.12 1/2	.09 1/2-.11	.06-.07
Striped Bass	.28-.28	.16-.25	.18-.25	.18-.25
Tilefish	.04-.06	.. ..	.04-.06	.. ..
Whiting	.75-3.00	.75-4.00	.75-3.50	.50-4.00
Yellowtails	.03-.10	.04-.10	.02 1/4-.08	.02 1/2-.10
Clams, hard	1.50-8.00	1.50-7.00	1.00-4.25	1.00-8.00
Clams, soft	1.50-2.25	1.00-2.25	1.25-2.25	1.00-2.00
Conchs	1.25-2.50	1.00-7.00	.75-1.75	.50-1.75
Crabs, hard	1.00-2.50	.75-2.00	.75-2.00	.75-2.50
Crabs, soft	.35-1.75	.65-2.00	.65-1.75	.50-2.25
Crab Meat	.20-.65	.30-.70	.20-.65	.25-.65
Lobsters	.27-.31	.26-.30	.27-.32	.30-.36
Mussels	.50-.75	.50-.75	.50-.75	.50-.75
Scallops, Sea	.. ..	.. ..	1.70-3.50	1.70-1.70
Shrimp	.18-.25	.16-.26	.22-.28	.18-.30
Squid	.02 1/2-.08	.03-.06	.02 1/2-.07	.03-.07
Frogs Legs	.40-.55	.35-.60	.55-.60	.35-.60

Cookbook Reprint

For the second time within six months, it has been necessary to reprint the Fish and Shellfish Cookbook put out by the Fishery Council. This is the fourth edition of the informative 32-page book which is offered free to all who write the Council at 204 Water St., New York City.

Provincetown Whiting Plentiful

WHITING seem to be abounding in these waters, and the Gonsalves Fish Co. have been employing 30 men filleting them day and night. They are being shipped to the Boston market. Jackie Rivers has been bringing in an average of 100 bbls. daily, and Francis Captiva and Willie O'Donnell are averaging 50 bbls. daily for Pond Village Cold Storage in Truro.

Lobster Stock

Eight hundred short lobsters and 40 egg-bearing lobsters have been stocked in the waters of Bourne by the Department of Fisheries. These were supplied by the coastal wardens, having been seized under law.

First Horse Mackerel

The first horse mackerel of the season was caught in the National trap weir, and brought in by Jo Oliver. Dressed, it weighed 425 lbs.

Largest Salmon for 50 Years

A 38-pound salmon was also netted by Captain Oliver. According to Bill Sklaroff, it is the largest trapped in these waters for 50 years.

Radiophone for "Jennie B"

A Harvey-Wells radiophone has been installed in the Jennie B., owned and captained by Anthony Thomas.

PETTIT PAINT YARNS



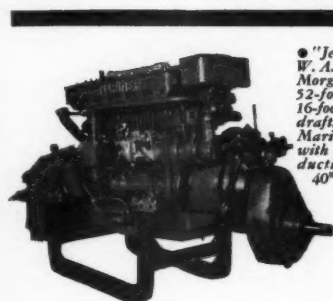
CAPTAIN HANNIGAN
OF THE PELICAN

WAS TACKLED BY PIRATES IN THE
CHINA SEA. HE RAN SHY OF CANNON
BALLS AND LOADED IN SIX CANS OF
PETTIT PAINT. AT HALF A MILE
HE KNOCKED SEVENTEEN PIRATES
COLD AS SALT PORK. THE REST GOT
GALLIED AND HAULED THEIR WIND!

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• "Jewell R.," owned by W. A. "Slim" Richmond, Morgan City, La., is a 52-foot shrimper with 16-foot beam and 5-foot draft. Powered by Mack Mariner 605, Type W, with 3:1 Twin Disc Reduction Gear, turning 40" x 24" screw.



Sturdy Mack Mariner Diesel drives her efficiently, economically, dependably —for bigger shrimping profits

THE engines in the Mack Mariner line, ranging in size from 65 to 100 horsepower, are conservatively rated on a continuous duty basis. The engine is quick starting—has 4-cycle efficiency. Direct factory branch service is available for Mack Mariners at 28 tide-water and 14 fresh-water ports.

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MACK MARINE ENGINES ARE A PRODUCT OF THE BUILDERS OF WORLD-FAMED GASOLINE AND DIESEL-POWERED TRUCKS, BUSES AND FIRE APPARATUS

New Brunswick Sardines

By C. A. Dixon

THE chief topic of discussion in regard to the fishing industry of Southern New Brunswick continues to be the sardine fishery, and it is a true saying that happy days are here again in almost every fishing village and hamlet of Charlotte County, and also in the manufacturing centers at Black's Harbour and Fairhaven, where factories in which the little silvery fish are packed are being operated at capacity production, with profit to all concerned. The same thing is true of the sardine centers across the border in Washington County, Me., where fishermen, boatmen and factory workers are continuing to enjoy the best season in many years. Every sardine cannery Down East is going full blast both day and night, or part of the night, week in and week out, and the total pack in Eastern Maine (chiefly) must be nearing a million cases. The demand, however, still exceeds the supply, in spite of steady capacity production on the part of the canneries, and it is believed that such will be the case for some time to come.

Quoddy Bay and its contiguous waters present a most striking appearance these days as numerous large sardine carriers laden with fish pass by a given point continually during the period from low water to high water, as many thousands of dollars worth of sardine herring are boated to the factories daily, and boatmen hasten to return to the points of production just as soon as their cargoes are hoisted out and supplies of salt and fuel taken aboard. Boatmen are making a lot of money, and doubtless this fact will result in some fine new craft being constructed for the 1942 season, as some of the boats of the sardine fleet are getting too creaky for further use, and larger craft will be needed for the prospective increase in the business of freighting fish for factories, which will ensue from newly gained markets since the European war broke out.

Great quantities of herring scales are being gathered by fishermen and others, owing to the steady and heavy production

of fish in almost every weir fishing location, although, as it has been pointed out before, a number of weirs at different points have "missed", as the fishermen say.

Waiting for Pollock

It does beat the Dutch how things will happen to put a damper on expectations of fishermen, sometimes; but thank goodness there is always an opportunity to dry out wet blankets. When pollock made their appearance in Quoddy River on Green Island Shoal not far from the boundary line between New Brunswick and Maine in the Passamaquoddy Bay region, some thought that it was a good omen to have the fish strike around the first of May; but the strike proved itself to be a dud as far as production was concerned and few fish have been caught in the months of May and June. It may be, however, that July and August will create a right about face to the proceedings, as old-timers recall just such a happening on certain occasions in years long since past. So pollock fishermen may yet enjoy a "come-back" in the handling industry in Quoddy before Autumn breezes blow, and later on in the season. So far there has been only a minor quantity of fish landed. Consequently, salt fish are very scarce at Wilson's Beach and other line-fishing ports of Southern New Brunswick.

Hoping for Hake

With the advent of July it is hoped that the usual blank in the hake fishing industry the last three or four years will give way to greater activity in this line, as those who largely depend upon trawl fishing count on making a lot of money in a couple of months when hake are plentiful, and it is not an unusual happening for single boats to bring in from eight to nine thousand pounds of fish to a set when fishing is good. Most of the hake caught in Southern New Brunswick are landed at three principal ports—Beaver Harbour, Wilson's Beach, and North Head, the latter two places being located at Campobello Island and Grand Manan Island, respectively, in the county of Charlotte.



The Name That Means Extra Long Service in Fish Netting

Ederer Fish Netting is skillfully manufactured to highest quality standards. It is scientifically designed to provide the proper size and style for every fishing requirement. As a result, fishermen can rely on getting the finest service with Ederer Netting. Complete stocks are always available at leading fishing centers.

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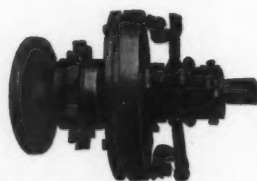


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of service on fishing boats.

Write to us or to the nearest
dealer listed for Bulletin and
prices.

Kinney

MANUFACTURING COMPANY
3561 Washington Street
Boston, Mass.

Boston Pier Landings for June

(Hailing fares. Figure after name indicates number of trips)

Acme (4)	130,000	Killarney (2)	115,000
Adventure (3)	274,000	Lady of Gd. Voy'ge (1)	54,000
Adventure II (2)	132,000	Lark (2)	240,000
Alden (1)	32,000	Leonardo (6)	117,000
Alice and Mildred (3)	177,000	Leretha (1)	70,000
Alice J. Hathaway (4)	312,000	Mao II (5)	102,000
Aiphonso (6)	96,700	Marcella (4)	168,500
American (1)	85,000	Maria Diaz (5)	113,500
Andrew and Rosalie (3)	85,000	Martha G. Murley (2)	93,000
Anna Guarino (2)	35,300	Mary Grace (3)	179,000
Annie (7)	139,000	Mary and Jennie (5)	132,000
Annie and Josephine (1)	30,000	Mary J. Landry (1)	46,000
Annie and Josie (6)	137,000	Mary W. (4)	142,000
Annie II (4)	58,000	Mayflower (4)	101,000
Antonina (6)	151,000	Nancy B. (5)	208,000
Arlington (4)	507,000	Naomi Bruce III (1)	40,000
Atlantic (3)	281,000	Neptune (3)	395,000
Bettina (3)	252,000	New Bedford (3)	227,000
Billow (1)	194,000	Newfoundland (3)	190,000
Boston (1)	97,000	Newton (2)	343,000
Breaker (1)	172,000	North Star (2)	305,000
Breeze (2)	307,000	Ocean (2)	574,000
Brookline (3)	457,000	Olympia (3)	126,100
Cape Ann (4)	215,000	Palestine (2)	101,000
Capt. Drum (3)	95,000	Pelican (2)	143,000
Catherine Graffeo (1)	40,000	Plymouth (3)	424,000
Catherine Saunders (1)	72,000	Pollyanna (2)	199,000
Chas. M. Fauci III (7)	162,500	Princess (2)	59,000
Comber (3)	416,000	Quincy (4)	462,000
Corinthian (2)	266,000	R. Eugene Ashley (2)	169,000
Cormorant (2)	345,000	Rainbow (3)	129,500
Crest (3)	716,000	Rita B. (3)	181,000
Dartmouth (3)	261,000	Roma (7)	134,900
Donald Amerault (2)	218,000	Rosalie F. (2)	97,000
Dorchester (4)	486,000	Rose and Lucy (3)	94,000
Doris E. Eldredge (2)	100,000	Rose Marie (6)	181,000
Ebb (3)	415,000	Rosie (4)	123,000
Edith L. Boudreau (1)	87,000	Saint Ann (4)	117,000
Elizabeth N. (1)	83,000	St. George (3)	405,000
Elvira Gasper (1)	63,000	Saint Joseph (5)	80,500
Ethel (2)	31,000	St. Provvidenza (16)	120,800
Ethel B. Penny (2)	93,000	Salvatore (3)	36,000
Eva II (6)	103,000	Santa Maria (2)	62,000
Fabia (4)	458,000	Santina D. (2)	68,900
Fannie F. Hickey (2)	32,000	Sea (3)	697,000
Fiori and Marino (4)	67,000	Sea Ranger (3)	207,000
Flow (2)	236,000	Serafina N. (2)	78,000
Foam (2)	312,000	Spray (2)	425,000
Frances C. Denehy (4)	302,000	Squall (3)	755,000
Frank F. Grinnell (2)	66,000	Stanley B. Butler (5)	476,000
Frankie and Rose (5)	166,000	Storm (2)	495,000
Fred Henry (4)	56,000	Superior (1)	43,000
Gale (3)	799,000	Surf (2)	455,000
Geraldine & Phyllis (1)	53,000	Swell (2)	498,000
Gertrude DeCosta (2)	52,000	Thomas Whalen (4)	478,000
Gertrude Parker (3)	170,000	Three Sisters (2)	61,000
Gert'de L. Thebaud (2)	153,000	Tide (2)	535,000
Gossoon (3)	277,000	Triton (4)	410,000
Helen M. (3)	169,000	Vagabond (3)	244,000
Ivanhoe (2)	90,000	Vandal (3)	259,000
J. B. Jr. (6)	104,300	Venture II (4)	367,000
J. B. Jr. II (2)	61,000	Viking (3)	165,000
J. M. Marshall (3)	162,000	Wamsutta (3)	167,000
Jackie B. (2)	54,000	Wave (2)	581,000
Jennie and Julia (3)	86,000	Wm. H. Killgrew (2)	110,000
Joffre (1)	84,000	Wm. J. O'Brien (3)	344,000
Josephine & Mary (3)	171,000	Wm. L. Putnam (1)	66,000
Josephine P. (4)	105,000	Winchester (3)	440,000
Josie M. (3)	99,000	Winthrop (3)	356,000
Josie II (3)	61,000		

On the Ways

The following fishing vessels have been on the ways recently at Bethlehem's Atlantic Works: *Adventure II*, *Breaker*, *Joffre*, *Ocean*, *Plymouth* and *Wave*.

Battery Maintenance

(Continued from page 6)

installation. Wet grounds, rotted cases and, in some instances electrolysis, may be traced to dirty batteries.

1. Keep the tops free of moisture and dirt.
2. Free or spilled acid may be neutralized by the application of dilute ammonia or soda solutions. Be sure the vent caps are tight before applying the ammonia or soda solution.
3. A coat of acid proof paint applied to the metal parts and to wood cases, will help preserve each against deterioration. Use a wire brush to remove corrosion from the iron parts before painting.

Filling

Filling is the addition of water to the cells to replace evaporation. Distilled or approved water should be added to the cells regularly and at sufficiently frequent intervals to keep the electrolyte above the top edges of the separators. The water should be added at the beginning of a charge. Do not add acid or electrolyte to the cells—water only is needed.

Care should be taken to see that the battery is not overfilled, otherwise electrolyte may surge through the vents and flood the tops of the cells.

In all cases, after filling, all vent plugs should be returned to their proper position and screwed securely in place.

Testing

The best way to determine the condition of a storage battery is to test the specific gravity of the electrolyte or acid in each cell, using a hydrometer for this purpose.

1. Set up a regular schedule and keep a log of the readings in each cell. Readings taken at indefinite intervals may permit trouble to proceed to the point that it cannot be remedied. At least once a month is advisable.
2. Be sure that you know the electrolyte specifications of the particular batteries that you have aboard. Some batteries have a fully charged gravity of 1.280 to 1.300, (even large types), others 1.240 and some 1.220. If uncertain, consult the manufacturer.
3. Use a pilot cell for intermediate or daily readings. Pick out one cell and take daily readings between the monthly general check. If any serious deviations are found in the operation of the pilot cell, check the entire battery. Use different cells, as pilot cells, each month, as electrolyte may be lost while testing and, by rotating the pilot cell, the loss can be equalized over the whole battery.
4. Do not expect all cells to read exactly alike. A variation of 10 points between cells is easily possible and the battery still be in good condition. When wider variations are found, and overcharging or check-charging does not remedy the variation, the situation should be investigated.
5. Check temperatures with a battery thermometer. Specific gravity readings will vary with temperature. Allowance must be made for this variation and the correct gravity computed, if trouble is suspected. These specific gravity corrections for temperatures are computed as follows:
If the temperature is above 80°F. add two points (.002) to the hydrometer reading for each 5°F. above 80°F. If the temperature of the electrolyte (acid) is below 80°F., subtract two points (.002) from the hydrometer reading for each 5°F. below 80°F.
For example—Hydrometer reading is 1.240, temperature of cell 105°F. (which is 25° above 80°), add 10 points (.010) and the corrected reading is 1.250. If the temperature was 25° below 80°, or 55°F., subtract 10 points (.010) for a corrected reading of 1.230.

Automatic Charging

Storage batteries aboard ship today are, in most instances, floating across the generator, carrying part of the peak loads, or taking over when the generator is not in operation. Charging

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THE SEA-PAL RADIO CO. 228 No. LaSalle St.
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is automatic, the battery absorbing current from the system, the amount being controlled by voltage regulator.

In floating a battery, the generator voltage required must be at least 2.00 volts per cell and not over 2.41 or 2.42 volts per cell. Somewhere in between will be the operating voltage of the system, the specific value depending on the auxiliary equipment and the operation of the craft. The determination of this voltage is a matter of observation and adjustment. The governing rule is to reduce the applied voltage to the lowest value which will just keep the specific gravity of the electrolyte constant.

To determine this voltage start with 2.30 volts per cell, observing, over a one week period, the specific gravity. If the specific gravity is maintained, drop to 2.25 volts per cell and repeat observations for a week. Repeat this procedure at weekly intervals until the voltage is reached which will not maintain specific gravity and then go back to the previous week's voltage setting. The voltage will then be correct for the battery operating under the existing load conditions. Usually a voltage ranging from 2.22 volts per cell to 2.25 volts per cell will result.

This procedure holds for low voltage engine starting batteries as well as auxiliary batteries. Specific gravity readings should be taken regularly and the electrolyte level watched quite closely. If too much water is required this is a sure indication (in a healthy battery) that overcharging is taking place.

Manual or Check-Charging

Manual or check-charging differs from that received automatically when the battery is floating, in that a constant and definite current is used and the battery is charged continuously.

Two rates are usually specified, the normal and finish charging rate. The normal charging rate is to be employed in continuous manual charging to the point where excessive gassing occurs, when the finish rate is to be used. The finish rate is also used in overcharging.

The normal charging rate (for Willard Batteries) is the same, in amperes, as the 8 hour discharge rate expressed in amperes. The finish rate (for Willard Batteries) is approximately 1/2 of the normal charging rate.

Previously, monthly specific gravity readings have been suggested. A check-charge at this time is recommended if wide variations are found in the specific gravity readings or if the battery has not been receiving enough current during the floating periods. The procedure follows:

1. Charge the battery at the normal charging rate until it gasses quite freely.
2. Reduce the charging rate to the finish rate, and continue until the specific gravity reads constant over a period of 3 hours.
3. Continue the charge until all cells read within 10 to 15 points of each other in specific gravity.
4. Watch temperature and cut charge rate if in excess of 110°F. or discontinue until battery has cooled to 90° and then resume charging.

Charging from Outside Sources

Rather than run auxiliary apparatus to charge batteries aboard, there is a growing custom to charge by means of rectifiers operated by shore current. Rectifiers used under such circumstances should have enough capacity to charge the entire battery at at least the finish rate and they should be of the insulated primary type. Rectifiers using auto transformers should not be used, especially aboard steel vessels, as there is considerable danger of shock due to the grounded A.C. power line, should a short or low resistance ground occur in the battery circuit.

It is also best to disconnect the battery from the rest of the ship's circuit when this method of charging is being employed.

Taking Batteries Out of Commission

If the craft is to be laid up for any length of time, the battery should be given a full charge until the cells gas freely. If it is to stand idle for two or three months, the battery should be disconnected from the circuit to prevent external leakage.

Should the idle period extend over three months, the battery should be taken ashore and given an occasional booster charge to keep it healthy. Trickle charging by responsible parties may also be done to keep the battery healthy.

Hyde's Present Line

AS previously announced, the Hyde Windlass Company has discontinued the manufacture of stock motor boat propellers up to 50 inches diameter. They are, however, continuing the manufacture of both Hyde Turbine Type and Type HB Propellers in sizes of 52 inches diameter and larger, and also Hyde Automatic Feathering Propellers in the full range of sizes from 12 inches to 40 inches diameter. In addition, Hyde is making a line of heavy duty stern bearings and stuffing boxes for 2½" to 6" diameter shafts.

Complete information covering any of the products mentioned will be furnished upon application by the Hyde Windlass Company at Bath, Maine.

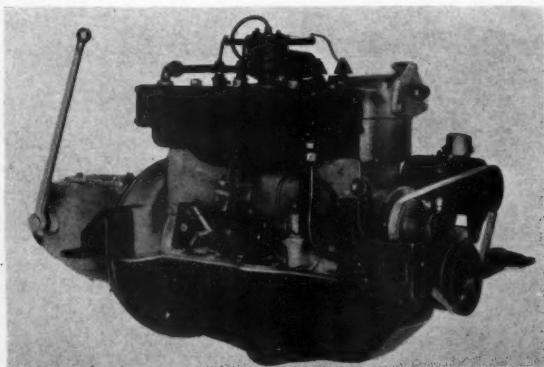
Gifford-Wood Catalog

GIFFORD-WOOD COMPANY, of Hudson, New York, has just published its new catalog No. 200 describing its material handling equipment. This catalog of 124 pages is profusely illustrated, excellently printed, and durably and attractively bound.

Among the many illustrations is one of a complete Gifford-Wood conveying system installed in a plant for handling fish from boats through the process of preparation for market. A special slat conveyor carries the fish from the receiving wharf to the cleaning tables on the fifth floor. A series of flat belt conveyors distribute them to various tables and also handle the fillets to the brine or hardening tanks and the waste material to chutes for disposal. A series of conveyors is also used for handling block and crushed ice.

Another illustration shows a conveyor of special design for carrying fillets of fish through the brine or hardening solution in the plant described above. It consists of special perforated buckets suspended on a double strand of chain which carry the fish through the brine bath at a controlled speed. The fillets are allowed to drain on the upper or return run of the conveyor and are discharged at the same end at which they are received, ready for packing.

Other items covered, of interest to the fish business, are Ice Breakers, Screened Cracked Ice, Cold Storage Plants, Quick Freeze Plants, Car Icing Platforms, Screw Conveyors for Cracked Ice.

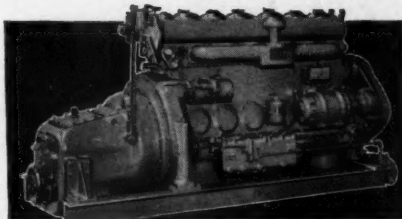


Lehman-Ford Model F5 conversion of Ford 4 cylinder model B engine, developing 50 hp. at 2500 rpm.

Giant Lobsters Worth \$10.00

IN an effort to establish a new record, the New England Museum of Natural History, Boston, Mass., is offering a reward of \$10.00 for the first lobsters whose weight, alive, exceeds 40 pounds. Fishermen are requested to ship by express collect in crate with ice, any live lobster weighing 35 pounds or more, to Mr. Frank E. Firth, U. S. Fish and Wildlife Service, Boston Fish Pier, Boston, Massachusetts. The measurements and weight will be determined, and if the specimen hits a new record, a reward of \$10.00 will be paid for the lobster. If it does not establish a new record, payment will be made for the total weight at the market price.

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It will be to your advantage to check the Murphy Diesels - They are full reversing, dependable and extremely economical to operate - They come in 3 sizes - 4 cylinder, 85 HP - 6 cylinder, 135 HP - and 6 cylinder with super-charger, 160 HP - These are heavy-duty continuous ratings.

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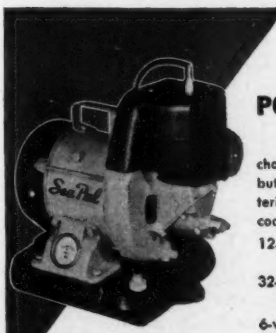


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12-volt, 350-watt model

\$64.50

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6-volt, 240-watt model

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 FOR BEST RESULTS SHIP TO
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 Frank W. Wilkisson, Inc., 16 Fulton Market.
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 Streamlined, welded construction.
 End vertical drive.
 Double friction.

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Here are a few of our listings: 34' lobster boat with 150 traps; write for particulars. 42 x 10 party or fish boat \$1700. 36' x 9' party boat \$750. Sardine smack 45' x 12' x 4'—capacity 450 bushels \$1050. Deep sea fishing boat, 65' x 14' x 6', oil powered \$6500. Marine Engines: 4-56 Gray, reconditioned, \$140. 150 hp. Lathrop Mystic, reconditioned, \$450. 150 hp. Kermaith Sea Man with reduction gear \$295. OIL: 60 hp. F-M, Model 36 A, six cylinder reduction gear, like new, \$1500. 210 hp. F-M Model 35 B, six cylinder, \$4,900; and many others. 38 x 38 new Hyde propeller, three fan L.H. bored 2 1/4" \$55. Write us as to your requirements. KNOX MARINE EXCHANGE, CAMDEN, MAINE.

FOR SALE

Pair 125 hp. 2 1/2:1 reduction gear heavy duty Buda gas engines used 3 short seasons. Excellent condition. \$1200. 65 hp. 6 cyl. heavy duty Lathrop in excellent condition. \$250. Herman Marine Service, Bay View Park, Toledo, Ohio.

FOR SALE

Fairbanks Morse	4 cyl.	140 hp.
Superior	4 cyl.	90 hp.
Bolinders	4 cyl.	100 hp.
Superior (Pair)	4 cyl.	60 hp.
3-1 Reduction Gear		
Used One Season		

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 264 South Street, New York

"DIESEL MONITOR"

A new book, entirely in the form of over 3,000 questions and answers, 530 pages, size 5" x 7", profusely illustrated. This book by the well known author, Julius Rosenbloom, offers a complete course on Diesel engineering. Price \$5.00 prepaid. Cash with order. ATLANTIC FISHERMAN, Goffstown, N. H.

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